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# PRIZE ESSAY.



## VANCOUVER ISLAND:

ITS

RESOURCES AND CAPABILITIES,

AS A COLONY.

BY

CHARLES FORBES, Esq., M. D., M. R. C. S., ENG.,

SURGEON, ROYAL NAVY.

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*"Est in conspectu 'Americæ,' notissima fama  
Insula; dives opum."*

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THE COLONIAL GOVERNMENT,

MDCCLXXII.

# VANCOUVER'S ISLAND.

{ COLONIAL SECRETARY'S OFFICE,  
29th October, 1861.

**A** PREMIUM OF FIFTY POUNDS STERLING WILL BE GIVEN BY THE Government of Vancouver's Island for an Essay which shall be adjudged to set forth in the clearest and most comprehensive manner the capabilities, resources and advantages of Vancouver's Island as a Colony for settlement.

The following rules will govern the award:—

1. Competitors must send their Essays in a SEALED COVER, directed to the Colonial Secretary of Vancouver's Island, on or before the 1st of January, 1860.

2. No name or mark is to be attached whereby the writer can be known by his Essay; but some distinctive motto is to be affixed.

3. A duplicate of the chosen motto is to be sent to the Colonial Secretary, marked on the outside of a sealed envelope, upon the inside of which is to be given the name of the writer of the Essay bearing such corresponding motto.

4. The Essay will be submitted for award to a Board composed of the following gentlemen, who have kindly consented to act on the occasion:

The Rev. C. T. Woods, M. A.

William F. Tolmie, Esq., M. D.

Gilbert M. Sproat, Esq.

5. After the Board has arrived at its decision, and signified the same to the Colonial Secretary, the Colonial Secretary will forward to it the SEALED Envelope, bearing the motto corresponding to that of the chosen Essay. The Envelope will BE OPENED BY THE BOARD, and the name found therein signified to the Colonial Secretary.

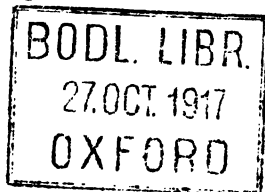
Envelopes of unsuccessful competitors will be returned unopened, if desired; but all the Essays will remain the property of the Government.

An award of Ten Pounds will be made for the second best Essay.

By order of the Governor.

WILLIAM A. G. YOUNG.

[In accordance with the foregoing announcement, a number of Essays were sent in to the Committee, who after a careful examination, awarded the prize to the Essay here produced.]



WM. A. G. YOUNG.

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# PART I.

## INTRODUCTORY, AND DESCRIPTIVE.

THE Voyager, approaching the Western Coast of North America, between the parallels of 48° and 49° North latitude, sees the land rising before him, in bold and rugged outline, both on the right hand and on the left, and, as he pursues his course towards what appears to be but the rugged inhospitable shore of a savage country, views with delight, resting on its rocky pedestal, that truest emblem of civilization "The Friendly Beacon," which, proclaiming that the wished for Haven is at hand, relieves the navigator from anxious care, and lights the emigrant to his new home.

On the right hand, away in the South East, in Washington Territory, is the Olympian range of mountains, forming the prominent feature of the coast line—a dark, rugged, snow capped mass, the precipitious cliffs of which appear to descend abruptly into the sea, fringed however, by a belt of gently sloping, undulating country, its sea wall shattered and broken up, by the force of the restless and resistless ocean, into rocky needle shaped promontories, and rugged outlying Islands.

On the left, stretching far into the North West horizon, is a mountain range, rising abruptly from the sea, rugged and broken in its outline, and presenting to the beholder's eye, every feature of mountain scenery—the sharp solitary peak, the broken sierra, and the rounded dome shaped mass, reflecting in the western sunlight, from their various surfaces and angles, the rays of light in infinite variety of hue, from the dark indigo of the lower ranges to the rosy purple of the peaks.

And this, the first view of VANCOUVER ISLAND, which presents itself, is one, to which a romantic interest is attached; for who will not recall, with delight, the early feelings and associations of his boyhood, when glancing at the chart, he sees, that under yonder rugged mountains lie Nootka and Clayoquot, names well remembered, but over the reality of which, from the remoteness of the scene, a certain mystery seemed to hang, graphically described though the places were, by Cook and Vancouver. The romance and the mystery have now however alike given way to a hopeful reality, and the Emigrant sees before him in that mountain range, the rocky pillars and stony buttresses of the land of his adoption—a land full of promise and of hope.

Passing the lighthouse at Cape Flattery, and entering the Strait of Juan de Fuca, nowhere more than ten to twelve miles in width, the voyager sees on the right hand the snow capped range of Olympia, its dark and frowning precipices descending gloomily to the shore. On the left, reflecting a purple light, the metamorphic and trapean rocks of Vancouver, with a fringing belt of yellow sandstone—and, sweeping on for about sixty miles, he sees before him,

and approaches another "Guiding Star" for the adventurous seaman, "The Flashing Light" on the Race Rocks; rounding which, a magnificent Panorama opens to his view; a picture which, viewed by the warm sunlight of a fine Autumnal day, can nowhere be surpassed for beauty of outline, or richness and variety of colouring.

On his immediate left, are the rounded trappean hills of Vancouver, covered nearly to the summits by a thick vegetation, the purple tints of the bold outstanding rocks mingling in harmony of tone, with the dark green of the Pine and of the Oak, while below, in the vallies, and lower grounds, the cool greys of the rounded rock masses, fringed by a thick carpet of purple brown fern, join with the Autumnal orange tints of the Maple, and the bright, yet tender green of the Alder and the Willow, to form a mass of colour, on which the eye dwells with delight.

Before the observer, stretches an undulating park-like Country, backed by wooded hills of moderate height—the sea face formed of a succession of low, rounded, rocky promontories, with outlying reefs and Islands. From Fisgard light, which, like a watchful sentinel, guards the entrance to the harbour of Esquimalt, past Victoria harbour, Beacon Hill, and, sweeping on by Cadborough Bay, this same character of country obtains; its sloping pastures, studded with oak and maple, giving, from their general appearance, the idea of a country long occupied by civilized man, and covered with flocks and herds

To the North, outlying groups of Islands, some low and undulating, others bold and picturesque, stud and spring from the glassy sea.

And in the East, the horizon is bounded by the American Continent, grandly outlined and defined by the noble proportions of Mount Baker, towering in its mantle of perpetual snow, from the giant shoulder of which, stretches, in a South Easterly direction, the serrated snow clad range of the Cascades.

Vancouver in his "Voyage," thus speaks of a portion of this locality, and his special description, has a general application: "To describe the beauties of this region, will, on some future occasion, be a very grateful task to the pen of the skilful panegyrist. The serenity of the climate, the innumerable pleasing landscapes, and the abundant fertility, that unassisted nature puts forth, require only to be enriched by the industry of man, with villages, mansions, cottages, and other buildings, to render it the most lovely country that can be imagined, whilst the labour of the inhabitants would be amply rewarded in the bounties which nature seems ready to bestow on cultivation."

Thus Vancouver wrote, in May 1782, nearly 80 years ago, and the field is still unoccupied, still open, calling for the labour of man, to regulate its wild luxuriance, and develope its latent wealth. The first, the initiatory steps have been taken, however, for the occupation of this fruitful, smiling land; and the industry of man will soon complete the lovely scene, which, with prophetic eye, its discoverer so clearly foresaw, and which he so eloquently foretold.

Situated between the parallels of 48° 20'' and 51° N. Lat. in from 123° to 128° W. Long. Vancouver, from its insular position, enjoys a climate much less rigorous, and more equable, than the corresponding area, on the continent off the shores of which it lies.

Of an elongated oblong form, it is essentially a mountain ridge, attaining, at Mount Arrowsmith, an elevation of 5,900 feet, composed of metamorphic and trappean rocks, fringed by a belt of carboniferous sandstones and other sedi-

mentary deposits. Cut up by numerous arms and inlets of the sea, in no case does the water-shed suffice to give a navigable stream, though numerous fresh water lakes are found, embosomed amongst the spurs of the mountain ranges. In length, 300 miles, with an average breadth of 30 to 50, its outline is boldly picturesque, its shores are characterized by abrupt cliffs, rocky promontories, magnificent harbors, sheltered coves, and pebbly beaches.

Its surface is beautifully diversified by mountain precipice, hill and dale, and undulating prairies, the tameness of which is broken, by numerous bosses of trappean rock, which raise their forms on either hand, and round which, the gnarled oak, spreads its leafy arms, affording a grateful shade in the summer sun.

In such localities, the general feature of the landscape is very similar to many parts of Devonshire, more especially to that on the eastern escarpment of Dartmoor, and the resemblance is rendered the more striking by the numerous stone circles, which lie scattered around. The trappean rocks, which, in Vancouver, take the place of the granite of Devon, as giving feature to the scene, furrowed, grooved, and scratched by ice action, point to a period far back in time, when a submerged land lay under a Boreal ocean, and these stone circles point to a period in ethnological history, which has no longer a place in the memory of man.

Scattered in irregular groups of from three or four, to fifty or more, these stone circles are found, crowning the rounded promontories over all the South Eastern end of the Island. Their dimensions vary in diameter from three to eighteen feet; of some, only a simple ring of stones marking the outline now remains. In other instances the circle is not only complete in outline, but is filled in, built up as it were, to a height of three to four feet, with masses of rock and loose stones, collected from amongst the numerous erratic boulders, which cover the surface of the country, and from the gravel of the boulder drift which fills up many of the hollows. These structures are of considerable antiquity, and whatever they may have been intended for, have been long disused, for, through the centre of many, the pine, the oak, and the arbutus have shot up and attained, considerable dimensions—a full growth. The Indians when questioned, can give no further account of the matter, than that, "it belonged to the old people," and an examination, by taking some of the largest circles to pieces, and digging beneath, throws no light on the subject. The only explanation to be found, is in the hypothesis, that these were the dwellings of former tribes, who have either entirely disappeared, or whose descendants have changed their mode of living, and this supposition is strengthened by the fact, that a certain tribe on the Fraser river, did, till very recently live, in circular beehive shaped houses, built of loose stones, having an aperture in the arched roof for entrance and exit, and that in some localities in upper California the same remains are found, and the same origin assigned to them.

The climate of Vancouver, in the succession of its seasons, and general thermal conditions, approximates closely to that of Great Britain, modified by special circumstances connected with its physical geography.

Situated close to a continent the mountain ranges of which are clothed or capped with perpetual snow, surrounded by an ocean remarkable for its extremely low temperature, certain local peculiarities present themselves to

the observation of the climatologist—and these are well and specially marked in the S. E. end of the Island, owing to its proximity to the Olympian range of mountains in Washington Territory.

This range, running East and West, presents its Northern aspect to Vancouver Island, and since on this aspect the snow remains on the mountain peaks all the year round, the winds which blow from this direction are occasionally cold and chilling.

The balmy breezes of the South, laden with moisture which would materially modify the arid heat of the later summer, are intercepted by this range, their moisture condensed and heat abstracted, if they do blow home, they come not like the genial South, breathing incense and bringing fertility, but more like an easterly wind in Europe, dry, chill and cold.

On a clear summer day, when the direct rays of the sun are scorching, and labour or exercise on the dry and heated surface of the earth is overpowering, a gentle southerly breeze may be blowing, so gentle as not to make itself felt in the open, yet so cold as to make the heated traveller long for an extra covering if he seeks the shade. In like manner, to the hot day succeeds a cold night. The heat obtained from the calorific rays of the sun during the day, is quickly radiated from the surface of the earth, and down from the mountain peaks comes creeping the heavy cold air, to spread itself over the surface of sea and land.

Setting in about the middle of November, the rains are frequent until April, the weather in general taking the following course:

After the gales with rain, which generally mark the period of the equinox, fine clear weather sets in, and continues until about the middle of November; at this period, rain begins to fall continuously for days, and gales of wind are frequent on the coast.

The Barometer ranges from 29.50 to 30.10, and falls rapidly on the approach of a southerly gale. Rising gradually to 30.20 and 30.50, a northerly wind springs up, and three days of fine clear weather with hoar frost generally follow.

After the third day the Barometer slowly falls, and again the gale springs up, and the rains come down, to be succeeded after a few days by a rising glass and frosty weather, which, as the season advances, becomes more intense and is accompanied by hail and snow. The latter seldom lies for any length of time, the winter of 1859-'60 being, however, a remarkably severe exception.

These exceptional seasons occur in all climates, and here only prove the rule that an open, wet, winter, characterizes Vancouver Island.

During this period the appearance of the landscape is gloomy, the sombre dark green foliage of the pine throws a heavy shadow on the bare rocks, the warm brown carpet of fern has in a great measure disappeared, the bramble has died down, the thickets of rose, of raspberry, and of sweet briar are but naked skeletons, and nothing is left to gladden the eye but the graceful clusters of the wax-like snowberry, contrasting with the beautiful green of the young and springing pines.

In the month of March winter begins to disappear, and, bursting from the teeming earth with the first warmth of spring and early summer, numerous bulbous plants raise their beauteous heads arrayed in the love-

liest colours, to welcome the coming season. The delicate lilac petals of the Kamass, the beautiful blue *Collinsia* with its starry eye, bringing to remembrance the "Forget me Not" of the old home, the graceful *Trilium* in its glossy setting of dark green leaf, and, amongst the broken rocks and gnarled roots of trees, springing lightly on its delicate stem, the graceful drooping *Erythronium* or dog tooth violet. The wild *Ribes* with its scarlet blossom gives early evidence of life, and amongst the dead leaves of a bygone year, smiles a bright encouragement and welcome to the opening buds. The spring grass and young shoots of the fern give a covering of tender green to the earth, over which, during the dark months of winter, the solemn pine has been brooding,—the Oak unfolds its leaf, the Maple gently opens unto day, the Willow, Alder, and Aspen, fill the hollows with their yellow green light, the Gooseberry and the Currant, the Raspberry and the Rose, in their native thickets burst into leaf and into blossom.

Numberless minute but lovely flowers spring through the grassy carpet, or, in groups of rich and gorgeous colouring, irregularly scattered by nature's hand, clothe the but now dead and naked rock with a bright mantle. The surface of the earth is teeming with life, the air is redolent of the odours of a thousand blossoms, and the face of the whole country sweeping on in graceful undulations is, literally, a Garden of Roses.

In the months of June and July, vegetation attains its most vigorous growth, and its progress is most remarkable. In August and September the want of rain begins to be felt, the summer heats parching the ground and scorching the pastures. After the break of the season, the fine weather of the later Autumn (the Indian summer) sets in, and the mellow tints on leaf and spray give the chief charm of the year to the lovely landscape, while they proclaim that its beauty is for a time about to pass away.

The prevailing winds during the summer months, are from S. W. to N. W. blowing freshly during the day, the nights tranquil and clear.

Northerly winds occasionally prevail, and, for such a latitude as Vancouver, are quite exceptional in their character—being hot and dry. Blowing gently from the north, they sweep over the land heated by the rays of the summer sun, and gathering fragrance in the Pine woods as they pass, they fill the air with a transparent haze, and give an almost tropical appearance to the landscape.

Such is a brief outline of the nature and succession of the seasons in Vancouver Island, and a glance at the Meteorological Register appended, if compared with that of Great Britain, will show a close isothermal relation.

The chief and most striking differences appear to be, that in Vancouver, the spring is somewhat later and colder, the summer drier, the sun more scorching, though the average mean temperature is the same.

The autumn of the American climate is finer than that of the European, and the fine weather, (the Indian summer) extends further into the year. The winter months, in ordinary seasons, are much the same as in the West of England, in the severer and exceptional, like the Midland counties, and East coast of Scotland.

Such also are a few of the objects of beauty and interest which present themselves to the observer and admirer of the varied charms of nature, on his first approach to, and landing on, the Island of Vancouver—an island destined to play a great part in the future political history of the world.

The early history of this important region can be nowhere better studied than in the voyages of Cook and Vancouver.

Brought into special notice just eighty years ago, Vancouver Island was the cause of a dispute, a political rupture, and very nearly of a war, between Great Britain and Spain. In 1788, certain individuals, subjects of Great Britain, agents of a mercantile house in Canton, purchased from the natives the land about Friendly Cove, in Nootka Sound, the latter at the same time, according to their customs, conferring sovereignty on Mr. Meares, the purchaser, by doing homage to him. Dwelling houses, warehouses, &c., were erected, and on the English leaving for a season, these were left in charge of the Chief, Maquinna, Mr. Meares intending to return in the following year.

In the mean time a Spanish officer arrived with two ships of war, and took formal possession of the place, claiming sovereignty over the whole. The dispute was referred to the respective Governments of Great Britain and of Spain, and on the latter attempting to justify the measure, a fleet was promptly fitted out by the former, and a declaration of war was imminent.

This prompt measure brought Spain to terms, and Nootka was eventually given up, Captain George Vancouver of the Royal Navy, being sent out on the part of England to receive the transfer, and at the same time survey the coast and prosecute a voyage of maritime discovery.

From this period onwards, the country was visited only by Fur Traders, and it was not until 1843 that any settlement was formed on the Island. In that year the Hon. Hudson's Bay Company started a Trading Fort in the Harbor, and on the land which now forms the site of the City of Victoria.

In 1849 a Colony was formed, and encouragement given to agricultural immigrants, under the auspices of the Puget Sound Agricultural Association.

In 1858, the existence of gold in the banks and on the bars of Fraser River was made public, and a great rush took place to the new "Dorado;" gold miners, capitalists, and land speculators, flocking to the scene of speculation, enterprise and adventure.

Since that time the progress of the Colony has been rapid, the City of Victoria springing into existence as if at the touch of a magician's wand. At the present moment the prospects of the Colony look brighter than ever, a great advance, a grand development is "looming in the future," both for Vancouver and the sister Colony of British Columbia an advance and development—which must tend to the natural and inevitable result of combining them politically, as they are physically, together, and giving them a community of interests, in their mutual relations.

## PART II.

### PHYSICAL GEOGRAPHY, GEOLOGY, HYDROGRAPHY, AND METEOROLOGY.

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The great chain of the Rocky Mountains running from N. W. to S. E. form the *axis of elevation* of the Western coast of North America; and the Physical Geography of British Columbia and of Vancouver Island is due, primarily to this mountain range, and secondarily, to the eruptive elevatory forces of that great line of volcanic action, of which Mount Baker, Mount Ranier, and Mount Helen, are the vents.

The range of the Rocky Mountains is composed, generally, of igneous hypogenic rocks, having, resting on and flanking them, silurian deposits, associated with gold bearing rocks..

It has been recently ascertained, however, by Mr. Bauerman, of the North American Boundary Commission, that in the vicinity of the 49th Parallel, this range is mainly composed of contorted, false bedded, stratified rocks, very full of ripple mark, with some interstratified basaltic traps. These beds rest on a gneisso-granitic mass which is exposed at Pend-Orielle Lake, about half way between the Columbia and Kootaine Rivers.

This granite is the Central Geological Axis of the country, and it divides the unaltered rocks of the Eastern Slope, from those of the Western side, which are principally black slates and limestones, contemporaneous with the lower beds of the Rocky Mountains, but they are very much altered and disturbed both by granitic and greenstone rocks. It is remarkable that only one greenstone dyke is exposed to the eastward of Pend-Orielle Lake, (in the valley of the Kootaine River), while the amount of metamorphism in the rocks increases as we pass westward from the Columbia to the Pacific, or valley of the Fraser River.

This great range, then, runs in a N. W. and S. E. direction, at an average distance of from 350 to 400 miles from the coast.

Parallel to this, running in the same general direction, is the Coast Range, which sends down westerly, numerous rugged mountain spurs to meet the sea, and to form deep inlets.

This range, composed of plutonic, metamorphic and trappean rocks, permeated throughout by a system of metalliferous quartzose veins, and trappean dykes, sends off a branch known as the Lilloet spur, to terminate at the Fraser River, west of Hope. Between the range and the spur, is enclosed a chain of lakes, which, with their portages, are of great importance as a means of transit to the upper country. A succession of elevated plateaux of the tertiary age, stretch westerly from the base of the Rocky Mountains and their flanking ridges, to this Lilloet Spur of the Coast Range, and, cutting its way through



the friable materials of this deposit, bursting through the mountain passes at Yale and Hope, the Fraser River with its golden waters, flows onwards to the sea, bringing down in its spring and summer torrents, those lighter particles of gold which, accumulated on its banks and bars, have been the means of directing attention to, and developing that amazing wealth of the rugged upper country, whence the noble stream derives its springs of life.

Sweeping on past Yale and Hope, the River leaves its rocky barriers behind, and rolling on in graceful, sweeps, passes the rising city of New Westminster, to empty its flood into the Gulf of Georgia. During the latter part of its course, it flows, a tranquil, steady stream, through tertiary and alluvial deposits, carrying with it sedimentary matter to be deposited as banks and shoals, the nuclei of future "green fields and pastures new."

The Colony of British Columbia, which thus extends its western borders to the sea, has a noble barrier for the protection of its shores. An outlying ridge, another parallel chain of mountains, cut off however by the sea from the Continent, with which, in its physical geography it is connected, forms an archipelago of islands, the chief of which is the sister Colony of Vancouver.

The whole northern and western sea face of British Columbia as far south as Howe Sound, is a rugged mass of plutonic, trappean and quartzose rocks, with associated semi-crystalline limestones. Cut up by numerous inlets and arms of the sea, it needs no protection against the winds and waves, but sends out its adamantine promontories to meet them.

Far different however is the coast line from Howe Sound or Burrard's Inlet southwards. Stretching in a semicircle the convexity of which touches the foot range of mountain above Langley on the Fraser, and reaching south past Bellingham Bay into United States territory, is a deposit of loose friable sandstones and alluvium, the same through which the Fraser River cuts its way. These sandstones at Burrard's Inlet and at Bellingham Bay contain seams of lignite, the associated friable sandstones where hardened and partially metamorphosed, showing impressions of a dicotyledonous plant allied to the maple.

All geological evidence tends to prove, that the last upheaval of this continent and outlying islands was slow and gradual, occurring in the post pleistocene or most recent tertiary epoch. And the existence of this belt of sandstone and alluvium, which is of such vast importance to British Columbia, is due in the first place to *such* upheaval and deposition of alluvial matter, in the second place to the protection of the outlying insular barriers, Vancouver, and its dependencies.

The great importance (physically speaking), to British Columbia of this barrier group of islands, will be at once apparent to any one who takes into consideration the powerful effects of the violent storms which rage on this coast in the later autumnal and early spring months, together with the sweeping currents, which, rushing irregularly in all directions, carry everything but the hardest rocks before them. Without such protection as is thus afforded, the loose friable materials of the district indicated, must have been long since swept away, and what will eventually be a rich agricultural country lost to the industry of man.

The special physical geography of Vancouver in so far as regards its form and feature has been already briefly given—it now remains to say a few words on its geology.

The geological structure of a country like Vancouver, owing to practical difficulties, can only be arrived at by deductions from partial observations, such as are afforded by sections on the coast, by ravines, water courses and mountain summits. Covered by a thick vegetation it is impossible in the summer months to penetrate the valleys to any good purpose, and in the winter months the task is too arduous, if not impracticable. Enough however is apparent and known to shew the general geological character of the Island.

An axis of metamorphic gneissose rock is found in the southwestern extremity of the Island, having resting thereon, clay slates and silurian deposits, or at all events rocks of the Palæozoic age. A black bituminous looking slate is brought from that locality, as also from Queen Charlotte's Island, but no observer has yet seen it in situ and no true or definite account of it can be obtained. A great deposit of clay slate has existed along the whole south and west, but, shattered and broken up by intruded trappean rocks, it has been almost entirely removed by the subsequent glacial action which grooved and furrowed the dense crystalline felspathic traps. Masses of lenticular or concretionary limestone are interspersed throughout this formation, and afford good lime for economic purposes. Along with the traps, other rocks of igneous origin have been erupted, and at the Race Rocks a remarkably beautiful dark green hornblendic rock is found massive, studded with large and perfectly formed crystals of quartz.

The sedimentary rocks are—carboniferous sandstones and grit, limestones and shales, of both the cretaceous and tertiary ages. These, in patches, fringe the whole coast from the extreme north, round by the Straits of Fuca to Nootka Sound, and enter largely into the formation of the numerous outlying islands in the Gulf of Georgia.

As shewn by the associated fossils, the coal field of Nanaimo is of cretaceous age, the whole deposit has undergone many changes of level, numerous extensive faults existing.

The sandstones with lignitic beds at Burrard's Inlet and at Bellingham Bay on the mainland, are, on the contrary, almost horizontal, in general loose and friable in their structure, in some cases slightly metamorphosed by the intrusion and contact of heated rock, and containing, as fossil testimony of age, impressions of the leaves of a maple like tree.

Upheaval, subsidence, and denudation had all done their work on the dense crystalline rocks of the axis of the Island, and on the cretaceous beds of Nanaimo, long before the tertiary sandstones, and lignites were elevated by the slow upheaval of the post glacial period.

Associated with this coal field and scattered over the neighbouring islands are numerous nodules of "Septaria," a calcareous clay charged with iron, of great value as a hydraulic cement.

Copper pyrites and peroxide of iron are found in various localities giving promise of mineral. In Queen Charlotte's Island, to the north, a very good Peacock copper ore has been obtained in considerable quantities, and at Barclay Sound on the S. W. coast, in the metamorphosed rocks of that locality, another pyritic ore of copper has been found, as also at Cowichan on the east coast. Traces of gold are to be found in the clay slates and permeating quartz veins, disseminated in fine particles throughout the mass, and also as auriferous iron pyrites.

In the neighbourhood of the coal measures are salt springs, from which a supply of salt may be readily obtained. These occur at Admiral or Salt Spring Island, and at Nanaimo.

The general lithological character of the whole Island is as follows:—

Amongst the metamorphic and erupted rocks are—gneiss, (gneisso granitic) killas, or clay slate, permeated by quartz veins, quartz and hornblende rocks, compact bituminous slates, serpentine, highly crystalline felspathic traps, (bedded and jointed,) semi-crystalline concretionary limestone. Amongst the sedimentary, are sandstones, and stratified limestones crystallized by intruded igneous rocks, carboniferous sandstones, fine and coarse grits, conglomerates, and fossiliferous limestones, shales, &c., &c., associated with the seams of coal.

The most remarkable feature in the Geology of the South Eastern end of the Island, is the scooping, grooving, and scratching of the rocks, by ice action. The dense felspathic trap already spoken of, is ploughed into furrows six to eight inches deep, and from six to eighteen inches wide. The sharp peaks of the erupted, intruded rocks, have been broken off, and the surface smoothed and polished, as well as grooved and furrowed, by the ice action on a sinking land, giving to the numerous promontories, and outlying Islands, which here stud the coast, the appearance of rounded bosses, between which, the soil is found to be composed of sedimentary alluvial deposit, containing the debris of tertiary and recent shelly beaches, which have, after a period of depression, been again elevated to form dry land, and to give the present aspect to the physical geography of Vancouver Island.

As might be looked for in a country so marked by Glacial phenomena, the whole surface of the land is strewn with erratic boulders. Great masses of many tons weight, are to be found, of various igneous and crystalline, as well as of sedimentary rocks, sufficiently hard to bear transportation and attrition.

Granites and granitoid rocks of various descriptions are to be met with, trappean rocks of every kind from whinstone through the whole series, Mica schist with garnets, breccias and conglomerates.

From these granitic boulders, and from the sandstones of the outlying Islands, valuable building material is obtained. Some of the grey granite equalling in beauty, and closeness of crystalline texture, the best granites of Aberdeen or Dartmoor.

A glance at the chart will show, that, while the last upheaval of the land, which took place at a geologically recent period, failed to connect Vancouver Island with the North American Continent, it, at all events was sufficient, to effect, to a great extent, the junction of numerous insular ridges, and thus to form a connected whole, of what *was*, and might have continued only to be, an archipelago of scattered islets. The upheaving force elevated and connected those, and brought to the surface, the great clay, gravel and sand deposits of the Northern drift, which had swept over and been deposited on, the submerged land. These sands, gravels, and clays, were now to form the surface soil of land, prepared for the habitation of man.

These constituents of the drift remain, in many parts, thinly covered by a coating of vegetable mould; but much has been washed away. The clay remains most generally and widely spread out, as a retentive subsoil, having,

resting upon it, a thick coating of vegetable mould. This most valuable soil is found sweeping down the sides of gentle slopes, filling up hollows and swampy bottoms, and, mixed with the rich alluvial deposits of such districts as Saanich, Cowitchan, Delta of Nanaimo, and Comax, forms an almost inexhaustable source of agricultural wealth.

The sandy loams formed on the surface, from the breaking up of the underlying sedimentary rocks, as at Nanaimo and Salt Spring Island, are very much richer than those of the great gravel deposit alluded to. In Cowitchan valley, calcareous soils and rich loams occur, formed by the disintegration and decomposition of the neighbouring limestone rocks. In some localities, the clay, cold and retentive, forms the only soil, and will require skilful treatment to bring it into use.

THE SOILS of Vancouver Island may be thus distinguished and described.

1st—A poor gravelly soil, with a thin coating of vegetable mould, bearing large timber of superior quality, coarse grass, and little under-wood.

2nd—A Calcareous sandy loam of good quality, producing excellent crops of vegetables, and very suitable for clover and other lime plants.

3d—The rich dark brownish black soil, humus, resulting from the decay of vegetable matter, mixed in some localities with alluvium, of variable depth and resting on the clay subsoil, which itself overlies trap and concretionary limestone.

The poverty of the soil, first described, is due to its inability to retain moisture. The winter rains and the more genial showers of spring, alike percolate the mass, and drain off into lagoons, leaving the hot sun of dry summers to desiccate the surface.

The second soil or sandy loam is always ready for cultivation, and the third and by far the richest, only wants subsoil drainage to carry the heaviest possible crops of wheat and other cereals.

From its insular character, and peculiar physical formation, Vancouver, possesses abundant means of water carriage—inlets and arms of the sea, run up to its most fertile valleys, and supply the place of navigable streams.

There are no rivers in the stricter sense of the word, such streams as flow through the country, being simply, the short water courses which discharge the overflow of lakes, or the surface waters of the neighbouring ridges, torrents in winter, nearly dry in summer, valuable only as a power for driving grist and saw mills, and possibly at a future day to be rendered useful as a means of irrigation, a process by which many parts of the country would be much benefited.

As might be expected in a country having a clay sub-soil, and covered with material through which water readily percolates, springs are numerous and the water excellent.

There are localities, however, where, clay forming the surface soil, the water lodges or runs off, and must be looked for at some little distance, where the clay is overlaid by a porous material. In these places it is readily found; in other cases the clay must be gone through before the water wells up.

Many springs are charged with sulphuretted hydrogen, and much resemble the Bath waters, being, however, far from unpleasant to the taste.

Stretching into the heart of the country, lying along the bases of the par-

allel ridges of trappean rock, are numerous lakes, in some cases forming a continuous chain, others, solitary, lie embosomed among the mountains, and form a beautiful feature in the landscape, placid, clear and calm, they lie, amongst the rocky, pine-clad hills, fringed by the willow, the alder, and the trembling aspen, the tender green of the foliage brightly yet softly reflected in the sunshine from the watery mirror, while stretching across as if to grasp the light, the dark purple outline of the shadow of the frowning peak, envelopes the farther side in gloom.

Washed by a truly boreal ocean, Vancouver Island and the neighbouring shores, present a peculiar, special, and most interesting study to the hydrographer. Nowhere are the peculiarities and irregularities of tidal currents so marked, nowhere are their problems so difficult of solution. The temperature of the sea water all the year round is remarkably low. In the summer months, when, on the water, the temperature in the shade ranges from 60 to 65, the water itself is from 52 to 56 deg. Fah., and it has a peculiar thick muddy appearance.

This low temperature which has a special effect in modifying the climate and keeping down the summer heat, and this muddy look of the water may be due to two causes or to both combined. The melting of snow will lower the temperature of water, and we know that a very considerable quantity of snow water, reaches the sea in the neighbourhood of Vancouver Island. Again, there are probably strong under currents setting southwards from the Arctic sea. These currents of cold water, are necessarily, from their specific gravity, at a considerable depth, and beyond the scope of ordinary observation. Sweeping southwards, when they approach the shores of a continent or island, they first course along the sea bottom, and stirring up the mud and sand, rise at length to the surface, laden with the finer particles of these substances. Around the shores of Vancouver Island, the sea bottom varies in different localities; where the felspathic trap and clay slate forms the bounding rock of the coast or harbour, a tenacious blue clay is found, where sandstone or other sedimentary rock exists, the sea bottom partakes of that same special character.

The survey of this important Island, begun by the distinguished navigator, from whom it takes its name, continued from time to time by different marine surveyors of the Royal Navy, was never specially undertaken until the year 1856, when H. M. S. Plumper was commissioned by the Lords of the Admiralty for that purpose, and the command given to an officer of great talent, energy and experience.

This survey was begun in the fall of the year 1857, and has been continued up to the present time. Charts of nearly the whole coast complete in every detail, and a book of "Sailing Directions," clear, concise and comprehensive, have been published by Captain George Henry Richards, R. N., the officer commanding and conducting the survey.

To these beautiful charts, and to this admirable work, the navigator and the physical geographer are referred for full information on such points of hydrographic interest as can be, in this Essay, only briefly alluded to.

In reference to the tidal anomalies of some parts of the coast, Captain Richards says, "In the outer part of Juan de Fuca Strait, there is no very great strength of tide, it varies from one to four knots, seldom so much as

the latter, but when approaching the more contracted part in the neighbourhood of the Race Islands which receives the first rush of the pent up waters of the Gulf of Georgia, strengthened and divided by the labyrinth of islands which choke up its southern entrance, it is not surprising that eddies, races and irregularities occur, which almost baffle any attempt at framing laws which may not rather embarrass than assist the seaman."

"The flood tide sets to the northward along the outer coast of the Continent and Vancouver Island."

"On the western side of the Island, the tides were found to be regular flood and ebb of six hours' duration."

"The great and perplexing tidal irregularities may therefore be said to be embraced between the Strait of Fuca near the Race Islands and Cape Mudge, a distance of 150 miles, and a careful investigation of the observations made at Esquimalt, and among the islands of the Haro Archipelago, shows that during the summer months, May, June and July, there occurs but one high and one low water during the 24 hours. High water at the full and change of the moon happening about midnight and varying but slightly from that hour during any day of the three months. The Springs range from eight to ten feet, the neaps from four to five. The tides are almost stationary for two hours on either side of high or low water unless affected by strong winds outside."

"During August, September and October, there are two high and low waters in the twenty-four hours."

"During winter almost a reversal of these rules appears to take place, thus, in November, December and January the twelve hour tides again occur; but the time of high water is at or about noon, instead of midnight."

"In February, March and April, there are two tides, the superior high water occurring from 1h. to 3h. p. m.; thus it may be said that in the summer months the water is low during the day, and in winter low during the night."

To meet these, and other no ordinary dangers, to afford protection to the seaman navigating these shores, Lighthouses have been established and are thus described in detail by Captain Richards:

"The Strait of Juan de Fuca is fairly lighted. On the small island of Tatoosh, close off Cape Flattery, is a fixed white light of the first order one hundred and sixty-two feet above the mean level of the sea, and visible in clear weather from eighteen to twenty miles. At New Dungeness and Admiralty Head on the southern shore, and on Smith or Blunt Island at the eastern end of the Strait, are also excellent lights, while on the northern side is the flashing light on the Race Islands and the harbour light at the entrance of the port of Esquimalt. Thus, after making the light of Cape Flattery there will only be an interval of about sixteen miles from losing sight of it until sighting that of Race Islands, and from the latter, New Dungeness and Esquimalt are both visible."

Many fine harbours are found along the coast of Vancouver Island, and from its extreme south western end where port San Juan affords effectual shelter to ships from all but S. W. winds, it will be both useful and interesting, briefly to describe the coast lines, harbours, and agricultural districts appertaining thereto:

From port San Juan eastwards the coast is bold and rocky, numerous creeks and inlets however, give protection to small craft, and Sooke Inlet is well adapted for coasting vessels and small steamers.

Esquimalt harbour, distant eight and a half miles from the Race Rocks on which is placed the flashing light before described, is distinguished by the white tower of the Fisgard Light, which marks the western point of the entrance. This is a safe and excellent anchorage for ships of any size, and with the aid of the "light," may be entered at any time with great facility; the holding ground is good—a tenacious blue clay. The extent of this fine harbour is about three miles by two, with an average depth of six to eight fathoms, and round the whole of the irregular circle described, numerous rocky promontories with outlying islands and gently sloping sandy bays, form the chief feature of the scene. Great natural advantages and facilities exist for the extension of townships and formation of docks, and there is no doubt but that this favoured spot will become the established headquarters of the Royal Naval Force in the Pacific. An Hospital and Storehouses for the service afloat and a Barracks for the officers and men of the North American Boundary Commission, already give an official service like character to the Port.

"Victoria Harbour is a little more than two miles eastward of Esquimalt, with its entrance between Ogden and McLaughlin points. The entrance is shoal, narrow, and intricate, and with S. W. or S. E. gales a heavy rolling swell sets on the coast, which renders the anchorage outside unsafe, while vessels of burthen cannot run in for shelter, unless at, or near high water. Vessels drawing fourteen or fifteen feet water may, under ordinary circumstances enter at such times of tide, and ships drawing seventeen feet, have entered, though only at the top of spring tides."

"The channel is buoyed, and every means has been taken to make the entrance as safe as possible, and doubtless the Harbour is susceptible of improvement by artificial means."

A dredging machine is about to be used in the Harbour, by means of which it is expected that an average depth of over twenty feet will be obtained.

"Originally selected by the Honourable Hudson's Bay Company, as the depot of their establishments, in consequence of the quantity of good clear land in the immediate neighbourhood, and the Harbour being sufficiently spacious for the few small vessels in their employ, was as a site in these respects admirably chosen, but it has been a fatal mistake, at a later date, not to have adopted Esquimalt as the commercial port."

The inlet of the sea which forms the Harbour of Victoria, runs northerly for some miles, with an average breadth of a few hundreds yards, and at one point is separated by but a very narrow neck of land from Esquimalt Harbour. Through this it has been proposed to cut a canal and so connect the two Harbours a plan which, if completely carried out by the removal of the only impediment to navigation by barges, the narrow gut of the "gorge," would be of very great advantage to the commercial interests of Victoria. Second only to the establishment of a tram-road or railway between the two ports.

Proceeding northward along the coast, numerous flat, rocky Islands and islets are passed, between which, at certain times, the pent up waters of the "Georgian gulf" rush with the noise and turbulence of a mountain torrent.

Gently undulating land, park like in its scenery, with curving bays, marks the coast line to the opening known as Saanich Inlet, thus graphically described by Captain Richards:

"This inlet forms a Peninsula of the South East portion of Vancouver Island, of about 20 miles in a N. N. W. and S. S. E. direction, and varying in breadth from eight miles at its southern part, to three at its northern. On the southern coast of this Peninsula are the harbours of Esquimalt and Victoria, in the neighbourhood of which, for some five miles the country is pretty thickly wooded, its prevailing feature—lake and mountain, with however some considerable tracts of clear and fertile land. The northern portion for about ten miles, contains some of the best agricultural land in Vancouver Island. The coast line is fringed with pine forests, but in the centre it is clear prairie, or oak land, much of it under cultivation. Seams of coal have also been found."

"Further north Cowitchan Harbour possesses one convenient anchorage and but for the large tract of good land contained in the valley of Cowitchan the port would scarcely deserve notice, and certainly the term Bay, is more applicable to it than that of Harbour."

This most important district of Cowitchan, with those of Comiakien, Quamichen, Somemos and Shawnigan, require a special and detailed notice, the importance to the colony in an agricultural point of view being very great besides affording an excellent example, comprising as they do, the general characteristics of the fertile valleys, and prairies which fringe the Eastern coast.

The Cowitchan valley may be considered to be, about fifteen miles wide upon the sea coast, narrowing rapidly in a westerly direction to the width of about six miles. Bounded by high ranges of mountain composed of Calcareous Sandstones, these ranges form almost impassable barriers to the valley, north and south. To the disintegration and decomposition of these rocks, all highly charged with the carbonate of lime, is due, the distinctive character of the soils, throughout the Cowitchan Valley. In their nature they are essentially calcareous, for while the other principles occur in different degrees, in this locality Carbonate of lime almost invariably predominates, and of this soil, there is usually a good depth of from two to three feet, resting on a sufficiently retentive subsoil of blue clay or gravel.

The Earths, chiefly light, very porous, and composed of due proportions of clay, sand, carbonate of lime and humus are well constituted for absorbing and retaining moisture, and the general colour from brown to black, with the entire absence of chalky or white earths, would likewise indicate a favourable soil for receiving and retaining heat. Samples taken from the Somenos Plains were found by experiment to absorb water sufficient to increase the volume of soil, from one-fifth to one-eighth of its whole bulk. Much of the soil along the river bottom is a clay loam of a brown colour, and is an excellent soil for wheat, beans, turnips and red clover. The alluvial deposit of the valley is, however, far from being all of a clayey nature, in many parts, chiefly on the southern side, the mould rests upon a gravelly and even a sandy deposit. This is likewise a rich soil, as may be seen from the abundant crops of potatoes, one of the most exhausting of plants, raised by the natives on the same patches of land for a series of years.



The soils on the prairie lands are either gravelly, or sandy and gravelly loams, eligible for barley, oats, rye, buckwheat, beans, peas, the root and leaf crops, potatoes turnips, Carrots, and the usual garden vegetables. Wheat may be successfully raised upon most of the soils, and, with proper tillage, upon all. The humidity of the atmosphere at certain seasons may prove a barrier to the cultivation of Indian Corn, but there is every probability, that this grain will one day form a staple, as it will assuredly be a profitable commodity both of consumption and export.

Under a judicious system of farming there can be no doubt, but that as good returns can be obtained from these lands as from any part of the Continent of America—the climate being especially adapted to the pursuits of agriculture—free from either the excessive heat and drought of the Californian summer, or severity of Continental American winters.

The loamy soils, everywhere possessing a depth of two to three feet, and containing a large proportion of the calcareous principle, are especially eligible for fruit culture.

The river lands would be easily fitted to bear varieties of the plum and the pear, and the oak plains around the Somenos and Quamichan Lakes, with an arenaceous clay subsoil so dry, that it could be worked immediately after a rain of several hours, are exceedingly well adapted for garden or orchard purposes. Apples, pears, plums, cherries, and, indeed, all our hardy garden fruits might be grown to perfection.

It is believed that the filbert and hardy grape vine could be easily and successfully cultivated, and among the native fruits, the blackberry, mulberry, raspberry, strawberry, gooseberry, currant, and high bush cranberry would require but little pains and culture to produce luxuriantly. The strawberry grows wild on the prairie lands, nearly of the same size as the garden fruit.

The species and varieties of plants growing in this rich and fertile district are exceedingly numerous; growing on the meadow lands are the following:—

White pea, (five to six seeded,) wild bean, ground nut, a species of white clover, reed meadow grass, bent spear grass, wild oat, wild timothy, sweet grass, cowslip, crowsfoot, winter cress, partridge berry, wild sunflower, marigold, wild lettuce, nettles, wild angelica, wild lily, brown leaved rush.

The fern attains the enormous height of from six to eight feet, and the grasses have all a most vigorous growth.

The chief economical woods are the oak and pine, and the following list comprises a general summary of the trees and shrubs met with.

Oak, red or swamp maple, elder, trailing arbutus, crab apple, hazel, red elder, willow, balsam, poplar, various species of pine—balsam fir, cedar, barberry, wild red cherry, wild blackberry; yellow plum, choke cherry, black and red raspberry, white raspberry, prickly purple raspberry, prickly gooseberry, swamp gooseberry, several kinds of currants, bear berries, red elder, mooseberry, snow berry, blue berry, bilberry, cranberry, whortle berry, red and white mulberry.

The Geological character of the district generally, from various indications, warrants the belief, that special exploration and examination will show

the existence of valuable minerals, excellent building material, free-stone and limestones, (some of the latter highly crystalline) are to be found in any quantity.

The region abounds in lakes and good sized streams, several good "Falls" are situated a short distance above the mouth of the mill creek in the Shownigan district, and this creek has like facilities for mills at various other points, to its junction with the Cowitchan river. Several other streams afford a sufficient extent of water-privilege to meet the requirements of a large population, as regards both grist and saw mills, as well as factories, but these are all inland at a distance of several miles from the coast.

The whole district is a rich delta, flanked by spreading prairies, bounded by precipitous hills; no site for any town or settlement, has yet been decided upon. Numerous favorable localities are to be found though the shoalness of the water is somewhat of a drawback.

The whole area of these five districts is, 57,658 acres, of which about 50,000 may be set down as superior agricultural land, the remaining 7,600 acres being likewise good arable land.

There is then a sufficient extent of good land laid out in this valley, to provide farms for a population of from five hundred to six hundred families, at an average of about one hundred acres to each.

The number of families comprising the native population of these districts, has been, after careful enquiries made, set down at two hundred, giving an estimated aggregate of 800 to 1000 souls. The disposition shown by these people has been most friendly, and they constantly express a wish to have white settlers amongst them.

Lying off this fertile region, the five districts of which have been comprised in the foregoing general description, is Admiral or Salt Spring Island, which has two good ports, Fulford Harbour on its S. E., and Ganges Harbour on its Eastern side.

"This Island is for the most part thickly wooded, but there is a considerable extent of partially cleared land, both at the northern end, and at the head of Fulford Harbour, which is now becoming peopled by settlers, under the name of Salt Spring District, a name derived from several salt springs on the Island."

Of the same geological formation, as the district off which it lies, there is an abundance of excellent building stone, and a fertile sandy loam gives scope for the labour of the Agriculturist. The Brinesprings have been ascertained by analysis to contain 4994 grains of salt per imperial gallon. The returns from the numerous small farms into which the district is divided, have been most satisfactory, and give great encouragement to the energetic settler, who, putting his own hand to the plough, can cultivate his land independently of hired labour.

From the north end of Admiral Island to Nanaimo, there is about twenty miles of coast line, guarded by a chain of islands, between which and the mainland are numerous passages, through which the tides course like torrents—the more remarkable of these are known as the "Narrows."

Nanaimo Harbour, in the "Sailing Directions," is thus described "when, the banks are covered this harbour gives the idea of a large street of water,

but the deep part is limited, although there is plenty of room for a considerable number of vessels moored."

Of the Coal, Capt. Richards thus speaks: "The mines of Nanaimo produce a fair bituminous Coal, which answers well for steaming purposes. It is lighter by about ten per cent. than Welsh Coal, and its consumption proportionately rapid. The working of the mines has not yet been undertaken on a scale commensurate with their importance, probably owing to the demand having been comparatively small. As the quality of the coal is, however, becoming better known the demand is rapidly increasing. It is now exported to California in large quantities, and ships are inconveniently detained waiting for cargoes. Some new and very promising seams have lately been discovered by boring, and the quality is said to be superior to any hitherto found.

"Newcastle Island, which lies close off the settlement, produces large quantities of coal, and the mines there, are being rather extensively worked.

"The Nanaimo coal is far superior to any that has yet been discovered or worked in this country, and there can be little doubt, but that it exists in sufficient quantities to supply the whole Pacific coast, for almost an indefinite period. The present price is twenty-five shillings per ton."

As already stated, this coal field, composed of coarse grits, sandstones, shales, and seams of coal is shown, by the associated fossils, to be of the Cretaceous age.

The specific gravity of the coal, is 1.24; its chemical composition—carbon, 63.93; hydrogen, 5.32; nitrogen, 1.02; sulphur, 2.20; oxygen, 8.79; ash, 15.83—thus closely resembling much of the Chili coal, and some of Borneo—the chief approximation being in the relative proportions of Hydrogen.

The whole deposit has undergone much disturbance from the action of volcanic forces in the neighbourhood, faults are very numerous, and the members of the sedimentary stratified rocks of this coalfield are disturbed and twisted about in a very remarkable manner.

Brine springs are found, containing a proportion of 3446 grs. of salt to the Imperial gallon. In Mr. Pemberton's "Facts and Figures" will be found an analysis of salt springs here and at Admiral Island.

To these mineral riches, Nanaimo with its associated districts, adds great capabilities for the development of agricultural wealth, and the town of Nanaimo, with about two hundred inhabitants, already affords a market for all kinds of farm produce.

The surrounding country has been divided into the mountain, cedar, and cranberry districts, these names having reference to the character of each.

The mountain district contains 16,000 acres; as its name implies, the general character of this region is mountainous and broken, the only good land lies along the stream known as the Millstone river, the grazing, however, is excellent, and the timber large and small of the best possible quality. The description given of the Cowitchan and associated districts applies to the cranberry, cedar, and delta plain divisions of this region, the fertile soils being in this case arenaceous loams, and on the Delta plains of the Nanaimo river, vegetable mould of great depth. Nearly the whole of the cedar district which contains about 11,000 acres is available for cultivation, and contains some very rich land

Mr. B. W. Pearso, Surveyor, in his report says, "the climate very nearly resembles that of Victoria, the general character of the summer being warm, with little or no rain, but heavy dews, and that of the winter mild, with an average of perhaps ten days snow, the frosts, though not severe, are of longer continuance. Rain falls in considerable quantities in the spring of the year, and it is generally thought that the average fall exceeds that of England."

Nanaimo is situated about 70 miles north of Victoria, and at present has only communication by sea. Passages are easily and quickly made by numerous small trading vessels. A screw steamer of small power is now running.

Measures are being taken to open a road direct to Victoria, which, when effected, will prove of the greatest value to both places, and to the intermediate districts. Owing to the great range of tide, which is sometimes as much as sixteen feet, the harbour of Nanaimo presents peculiar facilities for the construction of docks.

The valley of the Comox, another fine agricultural district, estimated to contain 300,000 acres of arable land lies north of Nanaimo; as yet unsurveyed, and but partially explored, no further special account of its capabilities can be given than that, in its general characters it closely resembles the Cowichan valley, the districts and delta of which have been already fully described.

Proceeding north and west, passing Vables Island and through Johnstone's Straits, an excellent route for steamers, abounding in good anchorages, the extreme north-west point of the Island is reached, where Fort Rupert, a trading station of the Hudson's Bay Company is established. Here the same carboniferous formation is met with as at Nanaimo, but apparently there have been fewer disturbances, the strata lie almost horizontally, only the upper beds have been as yet examined, and that but partially.

The western coast of the Island commencing at Cape Scott, possesses a great number of remarkable and interesting features. The general character and appearance of the mountain range which here forms the coast line have been already given, and it remains but to notice the points of interest connected with its hydrography, etc.

From Cape Scott a remarkable group of Islands extends westerly for forty miles; it is composed of three large and several smaller ones, which are high, conical, bare, nine pin rocks. Triangle Island, the westernmost of the group, is a very remarkable bare island, 1600 feet in height, having a curious notch on the summit. Between the Cape and the nearest Islands there is a good clear passage of two or three miles wide.

Extending from near this group off and round the coast, southerly, towards Woody Point, is a bank exactly similar to one, which, lying off the entrance of the Straits of Juan de Fuca stretches northerly to near Nootka Sound, and southerly to below the 48° parallel on the coast of the main Continent. A middle ground of deep water extending from Woody Point to below Nootka separates these banks which extend westerly to 125° and 126° of W. Long., with an average depth of water of from forty to one hundred fathoms, having a gravel or sandy bottom in the shallower and blue mud in the deeper parts; these banks get shallower as they stretch westerly and terminate abruptly at a sharp ridge, beyond which there are no soundings.

Both at the N. W. and S. W. extremities of the Islands these banks abound with Cod and Halibut.

A southerly current prevails along the whole west coast and often sends ships south of their reckoning.

Immediately south of Cape Scott, is Koatsine, an important inlet stretching across the Island nearly to Fort Rupert on the eastern side.

The natives in this harbour are more primitive than in any other part of the Island. They are a mild and harmless people, about 528 in number, and apparently diminishing yearly, yet there are more young people and children amongst them than in other tribes which have more intercourse with the white races. While all the other tribes flatten the heads of their children by strapping them on a board, these people simply compress the head by means of a handkerchief, and form it into a cone, the vertex forming the apex.

Coal has been found in this inlet, of the same character apparently as that at Fort Rupert and Nanaimo, and will some day be worked to advantage.

Woody Point separates Koatsina from Kayoquot, a district which extends to Nootka Sound. The natives here are very numerous, but were more so a few years ago. There is a feud between them and the Nootka tribe, who have killed a great many of them.

Nootka Sound is a deep inlet possessing few harbours or good anchorages. The small harbour or cove at its entrance is famous as the scene of the Spanish occupation dispute, and an anchorage nearly opposite, has a special interest as having been Cook's. The Nootka tribe numbers about 457 in all. Along the whole coast every promontory and bit of level land bears marks of old occupation, indicating a very numerous population at one time, though the well known migratory habits of the people must be taken into account.

Clayoquot Sound differs from all the other inlets of this coast. Its entrance full of banks and shoals of sand and gravel, instead of a deep muddy bottom. The narrow arms more resemble the neighbouring sounds except in geological feature. A gneisso-granitic rock (metamorphic) forms the axis of elevation, associated with which are hornblende and coarse grained quartzose rocks, intruded traps and quartz veins, indicating a region, most probably rich in mineral wealth.

Barclay Sound, situated close to the entrance of the Straits of Fuca, has a very important geographical position. A somewhat open sound studded with numerous Islands; it possesses several good anchorages, one within very convenient distance of the entrance at Cape Beal, on which Cape a Light-house will ultimately be erected.

At the upper end of the Sound a very remarkable cleft in the mountain range, known as the Alberni Canal, leads, after a course of 25 miles, to a level country of considerable extent, heavily timbered, with the finest specimens of pine and other woods, perhaps anywhere to be seen. Through this flows a stream discharging the waters of a chain of lakes, which penetrates northerly into the interior. The anchorage is good, and the whole sound, canal and harbour, can nowhere be excelled in the facilities they afford, for the defence and protection of commerce. The natives number about 800 or 900, and here, as elsewhere, their sole occupation is in obtaining supplies of food.

Bears, racoons, mink, hair, and fur seals are numerous, deer of two kinds, in large herds. From this locality was sent the magnificent spar, erected in Kew Gardens as a flag-staff.

Arriving next at Port San Juan, the above imperfect sketch of the coast line and harbours, &c., &c., of Vancouver Island is completed.

#### METEOROLOGY.

In the general introductory remarks, a description of the nature of the climate of Vancouver has been incidentally given. The following meteorological observations having reference to the Tables appended, will show the character of the seasons which have prevailed on the coast generally, for the last fifteen years, and will further elucidate the subject by pointing out the causes of the difference observable between the littoral and inland insular climates.

On the western side of the North American Continent, the summer heats are modified by the boreal currents and melting snows of the watersheds, while the severity of winter is not increased by a sweeping arctic current such as washes the Eastern Shores.

Arctic currents do sweep down, however, and in summer are felt far South, below the latitude of San Francisco, but, more diffused, they do not lower the temperature in a corresponding degree, and the coast, open to the warm rays of the western sun, and the moist westerly winds, presents to equal latitudes on the Eastern side, very unequal isothermal conditions.

A more extended series of observations is needed, before any general deductions can be made whereby to recognize the existence of any cycle, or predicate the possible recurrence of any particular season. Enough however is known to give the general character already assigned to the climate of Vancouver, viz.—a dry, warm summer—a bright, and beautiful autumn—an open, wet, winter and spring. Severe and exceptional seasons occurring at irregular intervals.

The winter of 1846 was remarkably severe, the cold setting in on the 5th of January, and continuing with severity until the middle of March, during which time the Columbia River was frozen, the thermometer ranging 5° below zero.

1847—Very mild throughout.

1848—The cold weather began on the 17th December, the Columbia River froze over, but the ice broke up before New Year's Day, the river remaining open.

1849—The cold weather set in on the 27th November, when the moon was at full, clear days and sharp frosty nights continued till the 10th December, when the Columbia was covered with floating ice, and snow began to fall heavily. This continued till the 18th (7 inches of snow on the ground), when it became mild, with S. E. winds and rain, and open weather continued to the end of the month.

These remarks apply to the coast generally; the following have reference specially to Vancouver:

The year 1850, as shewn by a thermometric register kept at Fort Victoria, was fine throughout,

A glance at the Abstract, Appendix No. I, will show that there were in that year 201 fine days, 96 overcast and foggy, 97 rainy, and 17 days on which snow fell. The abstract is not critically correct, as respects doing justice to the fine weather, for under the two last heads are included all days on which rain or snow fell, although the amount might be trifling.

Maximum Temperature of air in shade.

At 8, A. M., 65° Fah. on 20th June, 1850.

2, P. M., 84° " 26th June, "

8, P. M., 73° " 28th July, "

Minimum Temperature of air in shade.

At 3, A. M., 14½° Fah. on 4th December, 1850.

2, P. M., 24° " 4th " "

8, P. M., 16° " 4th " "

Mean daily temperatures given in Abstract Appendix, No. 1.

Snow began to fall on the 5th January. On the 24th there were 17 inches on the ground, which however was all gone by the 28th.

The maximum temperature for January was 47° Fah.

The minimum temperature, 21° Fah, on the 23d.

*February*—Was open and mild, on the 12th, gooseberry buds were opening; some hail, showers and frost towards the end of the month. Maximum temperature 58°, minimum 26°, Fah.

*March*—Variable weather, slight snow storms in early part, but so partial that on the 2d, early plants were coming into leaf in sheltered spots, native hemp was three inches high, elder bush putting out leaves. On the 7th, the catkins of the palm willow in full bloom. On the 29th there was still snow on the ground, and buttercups in flower. Maximum temperature 60°, minimum 27° Fah.

*April*—High winds alternating with calms. Strawberries coming into bloom on 13th. Maximum temperature 69°, minimum 35° Fah.

*May*—15 fine clear days, 12 overcast, 4 rainy. On the 1st, Plains covered with verdure, the turn cup lily, heartsease, crowfoot, jonquil and many other flowers in full bloom, camass flowering, spring wheat and peas rising, early potatoes above ground. On the 4th, campaniols and lupin coming into flower, wild cherry and service berry coming into blossom, and wild vetch flowering in warm places. On the 6th, apple tree in blossom, strawberries forming, 7th, potatoes planted in March and April coming up. 12th, early beans in bloom. 13th, wild rose coming into bloom. 25th, strawberries ripening. 31st, wild gooseberries ditto. Maximum temperature 79°, minimum 39° Fah.

*June*—23 fine clear days, 7 overcast and foggy. On the 14th, queen of the meadow and golden rod in bloom. 17th, potatoes flowering. Maximum temperature 84°, minimum 47° Fah.

*July*—22 fine days, 9 overcast. Maximum temperature 82°, minimum 52° Fah. 11th, barberry and raspberries ripe. On the 17th, first double rose on Vancouver Island came into flower.

*August*—26 fine days, 5 overcast. Maximum temperature 79°, minimum 53° Fah. On 16th, distant thunder, high wind, N. E.

*September*—24 fine days, 6 overcast. Maximum Temperature 74°, minimum 45° Fah. On the 7th, heavy dews.

*October*—20 fine days, 10 overcast. Maximum temperature 70°, minimum 38° Fah.

*November*—13 fine days, 14 overcast, 3 rainy. On the 19th a heavy gale of wind, felt simultaneously along the whole coast. Maximum temperature 55°, minimum 32° Fah.

*December*—10 fine days, 16 overcast, 4 rainy, 1 snowy. Fraser River frozen on the 4th, ice quickly broke up. Maximum temperature 48°, minimum 14½° Fah.

The above gives the general character of the year 1850, and may be taken as a good type of a season, intermediate between the severity of 1846, and the mild, open winters, which prevailed until 1859-60; when, as will be seen by Abstract, Appendix No. 3, the cold set in in November, and continued for some months with heavy falls of snow.

From March, 1860, the weather was mild throughout, and continued so through the winter and into the spring of 1861. The summer of this latter year was very hot and dry, the early autumn was very fine and clear, with occasional cold, south-easterly winds, heavy rains in November and early part of December.

The Abstracts appended (Nos. 2, and 3,) give for the year 1860-61, the ranges of the barometer, thermometer (wet and dry bulbs), number of days fine, rainy, &c., and although not altogether tabled in the same way, nor equally complete in all details, furnishes with that of 1850, a good comparative estimate of climatorial variation.

Care must be taken, however, to bear in mind, that in consequence of its insular position, washed by an ocean having a remarkably low temperature, the *littoral* climate of Vancouver, differs materially from that of the inland plains and valleys, therefore the Register No. 2, for 1860-61, kept on board one of H. M. ships, is peculiarly interesting as showing what range the thermometer takes in the shade, when removed from all possible influences of radiated or reflected heat.

To this cause is to be assigned the differences in the mean daily temperatures, observable on comparison of the different months in the two years, both ashore and afloat, and not simply to change or variation of climate, as will be seen by examination of abstract No. 4.

In the quarter ending 30th June, 1860, the highest barometric range was in April, 30.53; the lowest, 29.25. In the same month, there were 17 fine days, 7 rainy, and 6 overcast, with variable and light winds from E. and S. Sea water 50° Fah., the hygrometric observations show an average difference of 3° 7-10 Fah. between the wet and dry bulbs. Average temperature 51½° Fah.

In *May*—the barometer had an average range of 30.04. There were 18 fine days, 9 rainy, and 4 overcast, with variable winds, chiefly from S. W. Sea water 51° Fah. The thermometer average 55½°, with 4° 1-10 Fah. difference between wet and dry bulbs.

*June*—20 fine clear days, 6 rainy, and 4 overcast. Barometric range, average 30.02. Average of thermometer 61°, and difference of bulbs 4° 7-10. Sea water 55° Fah.



*July*—16 fine days, 6 foggy, 7 rainy. Average range of barometer, 29.93, thermometer  $60^{\circ}$  1-10, Fah. Hygrometer,  $3\frac{1}{2}^{\circ}$  Fah. Sea water  $58\frac{1}{2}^{\circ}$  Fah. Prevailing winds, S. and S. E. with calms.

*August*—24 fine days, 7 rainy. Average range of barometer 30.01, thermometer  $63\frac{1}{2}^{\circ}$  Fah., hygrometer  $1^{\circ}$ . Sea water  $58\frac{1}{2}^{\circ}$  Fah. Winds S. W., S. and S. S. E.

*September*—18 fine days, 7 rainy, 5 overcast. Average range of barometer, 30.12, thermometer,  $57\frac{1}{2}^{\circ}$  Fah., hygrometer  $1^{\circ}$ , sea water  $55^{\circ}$  Fah. Prevailing winds S. and S. S. E.

*October*—13 fine days, 11 rainy, 7 overcast. Average range of barometer 30.01, thermometer  $54^{\circ}$  Fah., hygrometer 103-155. Sea water  $50^{\circ}$  Fah. Winds N. E., variable, calms.

*November*—10 fine days, 12 rainy, 8 overcast. Average range of barometer 30.18, thermometer  $49\frac{1}{2}^{\circ}$  Fah. hygrometer  $1^{\circ}$  1-30, Fah. Sea water  $47\frac{1}{2}^{\circ}$  Fah. Prevailing winds, N. and S. W. to E. S. E.

*December*—15 fine days, 9 rainy, 7 overcast. Average range of barometer 29.96, thermometer,  $42^{\circ}$  Fah. hygrometer,  $1^{\circ}$  5-6 Fah. Sea water  $45\frac{1}{2}^{\circ}$  Fah. Winds N. and N. E., variable, frequent calms.

1861. *January*—10 fine days, 11 rainy, 10 overcast. Average range of barometer, 30.01, thermometer  $38^{\circ}$  Fah., hygrometer,  $3^{\circ}$  Fah. Sea water  $43\frac{1}{2}^{\circ}$  Fah. Winds variable, frequent calms.

*February*—9 fine clear days, 7 rainy, 11 overcast, 1 snowy. Average range of barometer 29.94, thermometer  $44\frac{1}{2}^{\circ}$  Fah., hygrometer  $3^{\circ}$  Fah. Sea water  $43\frac{1}{2}^{\circ}$  Fah. Winds light, variable, frequent calms.

*March*—15 fine days, 4 rainy, 19 over cast, 3 snowy. Average range of barometer, 25.02, thermometer  $46^{\circ}$  Fah. hygrometer  $2\frac{1}{2}^{\circ}$  Fah. Sea Water  $44\frac{1}{2}^{\circ}$  Fah. Winds, light, variable.

The importance of a knowledge of the remarkable differences observable in these registers, kept, one on shore, the other afloat, is obvious, both in a sanitary and agricultural point of view.

The humidity of the atmosphere can be only estimated by the above average difference between the wet and dry bulbs.

The absence of thunder storms is a remarkable fact. Distant thunder is heard at times, but very rarely does the electrical discharge take place over Vancouver.

To these tables of Meteorological Observations applying to Vancouver, is added an abstract from the register kept at the camp of the Royal Engineers at New Westminster, as published by Capt. R. M. Parsons, R. E. Clear and concise, it shows at a glance the nature of the continental climate, and is most valuable as a means of comparison.

New Westminster is situated on the right bank of the Fraser, 15 miles from where that river joins the Gulf of Georgia, about 70 miles from Victoria. As might be looked for, the differences in temperature, &c., are those of a continental as compared with an insular climate.

## PART III.

### POLITICAL GEOGRAPHY AND STATISTICS.

THE population of the Colony of Vancouver, exclusive of natives, numbers from 4000 to 5000, and amongst these are representatives of nearly every European and American nationality, with a considerable and increasing proportion of the coloured races, and of Chinese.

The native population, estimated at 18,000, is, generally, in a very degraded state; efforts are being made by missionary clergymen of various churches, to bring them into something like civilization, and no doubt, in time, on the plastic minds of the young, such good work will bear fruit, but from the adult much cannot be expected, and the native in this way, can only be looked upon prospectively, as a useful element in the body politic.

Occasionally, industrious, trustworthy individuals are to be met with amongst them, but as a body, their labour cannot be depended on, and, with one or two slight exceptions, at present forms no point of consideration in the labour market. Like all uncivilized races they have an invincible dislike to hard and continued manual labor, but they show in their rude carvings, and imitative jewelry, an aptitude for handicraft, and their acuteness in barter is remarkable.

The dialects of the various tribes are derived from the five great divisions of language spoken on the main land. Deep gutturals characterize them all, and from the constant repetition of sounds that can only be expressed by the letters X, T, L, in conjunction, give an idea to the hearer of what the ancient Mexican language must have been. A jargon called Chinook, is the medium of communication with the white races; it is composed of mutilated words of the English, French, and Spanish languages, with a mixture of the native dialects, the words strung together, without the slightest attempt at grammatical construction.

The energies of this people are at present only called forth and directed to the pursuit of the chase and of revenge; degraded, they do not scruple to live by the prostitution of their women, and under the influence of "fire-water," commit great crimes.

On the whole, however, their behaviour is wonderfully good, and the settler need fear no injury or molestation so long as he keeps the natives at a proper distance, manifests no want of confidence, and avoids giving to, or taking with them, intoxicating drink.

No census having been taken, the number of the white or Colonial population given above, is merely approximate and confined to established residents. There is besides however a large floating population, one of great importance to the colony, viz. the gold miners from the Upper Country; unable to work during the winter months, they come down to Victoria and there many establish

their winter quarters. They spend a great deal of money, and, open handed and generous, are ever ready to help a fellow creature in distress. To the honour of the British Columbian gold miners be it told, that competent authority has declared no more orderly set of men were ever met together in the pursuit of gold, the encampment or town at the Cariboo diggings being on a Sunday afternoon as quiet and orderly as the streets of Victoria.

Circumstances and times have changed since the early days of Californian and Australian gold digging. The search for that metal has become a regular steady branch of industry, and like all men who explore the crust of the earth for valuable ores and precious metals, the miners are distinguished by steadiness, industry, and marked intelligence.

One element of discord alone exists in the community (for political differences go for nothing), and that is the unhappy question of the social position of the colored races. It is a question which can only be settled by and in time. The sudden jar and conflict arising from attacking long established ideas and prejudices, give rise, in the kindest natures, in the most intelligent minds, to extreme views and violent measures.

Circumstances connected with the relative positions of the two races, more especially on the North American Continent, render it impossible that any sudden coalition or recognition of equal social rights should take place; and while on the one hand these rights should not be absolutely denied simply on account of *Race*, neither on the other hand ought they to be too loudly asserted on account of wealth or acknowledged political status. Neither side is yet prepared to meet the other, the transition to a different tone of feeling must be slow and gradual, the growth of a just appreciation and esteem engendered by the exercise and recognition of high moral principle. In no other case than this can there be a greater need to "bear and forbear." Let the white man endeavour to drive from his mind any idea of his absolute and necessary superiority over his fellow-man on account of race, "each has his own gifts," and let the coloured man remember that in bearing for a time his lot with patience he is elevating his moral nature, and in due time he will get his reward in the removal of those prejudices which now are brought to bear against him.

The employment of the People, generally, will be readily seen, by an examination of the analysis of the Trades License Act, Appendix No. 5, and to the occupations there detailed must be added, those very important classes, the miner, the stone cutter, the house carpenter, the artisan and skilled laborer in every branch of industry, whose numbers are too few to supply the constant demand for their labor.

The rates of wages are high, a shilling in any part of Great Britain being represented by a dollar, 4s. 2d. Thus a stone cutter makes from four to five dollars, that is sixteen to twenty shillings a day. The blacksmith about the same, and, depending on his abilities, possibly much more.

For good shoeing smiths, excellent opportunities offer, the cost of shoeing a horse being in this country, three dollars, or twelve shillings and sixpence.

House carpenters are paid according to the number of hours work; in general the wages average about the same as the other workmen stated above.

For all other labour the proportion holds good; where a man gets a shilling in Great Britain he would get a dollar here, and he could live better and for less money provided he had a cottage of his own. Independent of hired domestic help his only increased item of expenditure would be in the article of clothing; and that is now imported ready made at very cheap rates. It will be said, if wages are so high, the expenses of living will be commensurate, and what then will be the necessary expenditure of individuals and of families?

To such families as might be compelled to rent houses and hire domestic servants, the expenses would be heavy, for these, together with clothing, form the heaviest items of expenditure.

But there is no reason why every man should not be his own landlord, and in a new colony the more independent of domestic help that a family may be the better for the prospects of that family; in no country in the world can a working man earn such wages, and at the same time live so cheaply; and every man with a small capital and the exercise of patient industry may soon have a house of his own.

The following are the prices of provisions ordinarily in use in domestic life for the years 1859, 1860 and 1861:

1859. Beef per lb. 1s. 0½d.; Mutton, 1s. 3d.; Pork, 1s. 3d.; Vegetables, 3d. per lb.; Flour, 2d.

1860. Beef, 1s. 6d.; Mutton, 1s. 3d.; Pork, 1s. 0d.; Veal, 1s. 6d.; Vegetables, 2d.; Flour, 2d.

1861. Beef, 8d.; Mutton, 9d.; Veal, 10d.; Pork, 9d. per lb.; Vegetables, 2d.; Potatoes, 1d. per lb.; Flour, 2d. per lb.; Wheat, Oats, Barley, 1d. per lb.

GROCERIES, ETC. Tea, 3s. per lb.; sugar (hard), 9d.: brown do., 5d.; coffee, 1s. 6d. per lb.; eggs, from 2s. to 6s. per dozen; butter (winter). 3s.; Cheese, 1s. 6d. to 2s.; bacon, 1s.; Hams (English), 1s. 8d. per lb.; American, 1s. 1d.; pearl barley, 4d.; rice, 5d. per lb.; apples, 4d. per lb.; pickles, 1s. 6d. per bottle. Fish of fine quality can always be procured at a cheap rate, and abundance of excellent oysters are found in the creeks.

The market is usually well supplied with wine, beer, and spirits, which are sold at moderate rates. Ale and Stout range from £5 to £7 10s. per hhd.

WINE.	Port in wood, per gallon	.....	£	0	6s.	0d.
	In glass, per dozen	.....	1	16	0	
	Claret, per cask	.....	10	0	0	
	“ per dozen	.....	16	0	0	to £2 0 0
SHERRY,	in wood, per gallon	.....	1	6	0	to 1 0 0
	In glass, per dozen	.....	1	0	0	to 1 12 0
	“ “ fine	.....	1	12	0	to 3 0 0

Materials for housebuilding are plentiful and cheap. Lumber costs £3 to £3 10s. per 1000 feet. Bricks from £1 10s. to £1 15s. a thousand. Lime and sand in abundance, the former costs 2s. a bushel; convenient temporary residences can therefore, both in town and country be put up very cheaply. A mechanic or working man can build a convenient, comfortable house to accommodate six persons for from £100 to £150. Of course, for a smaller family, proportionate fractional sums.

In the town of Victoria and other settlements, six roomed-houses or neat cottages with all convenient outhouses, built of wood and plastered, cost, according to style, from £200 to £400. Of sandstone and brick at an increased expense of one fourth; of brick alone, one third more.

As already stated, house rents are high, 18 to 24 per cent. per annum, being the usual rate of interest for brick buildings, 40 to 50 per cent. for wooden structures.

The towns, villages, and settlements at present existing in Vancouver, are Victoria, Esquimalt, and Nanaimo. At Fort Rupert, in the north, the Hon. Hudson's Bay Company have a depôt, and at Barclay Sound in the south west there is an establishment for the export of spars and of lumber.

The town of Victoria, situated on the eastern side of the harbour already described, has sprung into existence during the last three years.

Originally the site of a depôt and trading establishment of the Hudson's Bay Company, it has, under the influence of the neighbouring gold regions and the great natural advantages, present and prospective, of its position, become a place already of great importance, not only to British Colonists but to those also in American territory along the whole seaboard of the Pacific. A Free Port, it puts no restraint on commerce but admits without duty and burthened with but few charges, all the necessaries as well as all the luxuries of life, all the tools, implements, and machinery needed for those industrial pursuits which develop the wealth of a colony. Already it has become the emporium of commerce, the metropolis of the north-west coast of America. The site is an admirable one (the only drawback being the comparative inadequacy of the harbour). A sweep of level land broken by a few ravines, rises gently to a moderate elevation from the rocks which bound the harbour. The soil is partly clay and partly gravel, the objections to the former can be readily obviated by drainage, for which the sloping declivities on every side afford great facilities.

Starting from the corner of Fort and Government streets as a centre, with a radius of three quarters of a mile, the plan of the town describes two-thirds of a circle stretching round the harbour. The streets, of good width (sixty feet), are conveniently laid off, crossing each other at right angles, the plan including school and church reserves. From any point of view Victoria presents a charming picture, and affords a striking proof of the energy and industry of the human race.

Twenty years ago, a wilderness; for many years afterwards, occupied only by the enterprising traders who first brought civilization to its savage shores, Vancouver Island long lingered in neglect; its important geographical position was, however, at length recognized, and steps were taken by means of a complete marine survey to develop its maritime capabilities and other resources.

This had been commenced, when, at the touch of the "golden wand" waved on the banks of the Fraser, Victoria sprang into existence; the forest and the brush disappeared, tents were pitched, and buildings run up, sales of land took place, the plan of the new town was formed and quickly grew into shape.

During the months of June, July, and August, 1858, eight large and power-

ful steamers ran constantly between San Francisco and Victoria crowded with passengers and loaded with freight.

A subsequent check to immigration took place, but nothing has impeded the steady advance of the colony, and remarkable progress of Victoria.

From any point on the western side of the harbour, the observer sees sweeping over a gently rising plateau, the town spread out before him; in the fore ground at his feet crossed at various points by several bridges, is the winding arm of the sea, along the bold rocky shores of the eastern side of which are built wharves and storehouses, where lie vessels of all sizes, from the coasting schooner of ten tons to the clipper craft of five hundred.

The stores, the shops, the hotels, and restaurants would grace a town of fifty instead of three years' standing; the rapid growth and increase may be judged of by the fact that of brick buildings alone, fifty-six have been erected during the present year.

Numerous churches and schoolhouses, belonging to Christians of nearly all denominations, testify to the anxious care, bestowed on the religious instruction of the community. An Hospital for the relief of the sick, and a charitable institution supported by the French residents, give proof that suffering humanity is not neglected.

Hook and Ladder Companies have been formed, to stay the scourge of fire, a small but very efficient Police force has been established, and the town only wants the introduction of gas, to vie successfully with many a colonial city of much older date.

This is about to be effected by the "Victoria Gas Company (Joint stock Limited)" which has its operations in considerable progress. The Company possesses a capital of £10,000, which may be, by special resolution, increased to £20,000. This and the "British Columbia and Victoria" Steam Navigation Company (also limited), are the only joint stock associations in the Colony: this latter runs three steamers, built specially for the trade on the Fraser River.

One great drawback to Victoria is the want of good water on the spot, the supply at present, is brought from a distance in carts, at a considerable expense. It is to be hoped that a water company or some other agency, may soon be formed to remove this great defect, and provide the colonists with a full supply of that great element of health, at a cheap rate.

A great oversight has occurred in laying out the plan of the town, no squares or other open places have been reserved; the present, to the exclusion of the future wants of the community have alone been attended to; and a great error has been committed in placing the cemetery where it now is, a locality objectionable in every way. The evils attendant on intra-mural interments, have of late been forced on every one's observation, and although just at present, the pure air of heaven blows freely over the town, the time will come, when, without squares, the air will stagnate in the long rows of streets, and the emanations from the confined burial ground, prove a fertile source of disease and of death. Not only is the situation of this cemetery bad, but a worse soil could not have been chosen.

A tenacious retentive clay, it is quite unfit for the purpose of a grave-yard, which must, as the population of the colony increases, be removed to some distance. Many more suitable spots could easily be found, and are to be sought for in the sandy gravelly soil, which in many parts skirts the town. The less clearing the better, the pine, the yew, and funereal cypress give character to the scene.

Having no squares then, let the present cemetery be converted into a public flower garden, let it still retain its sacred character however, and while the eye dwells with delight on the glowing colours of nature's choicest blossoms, let there be shade and quiet for meditation and repose.

The Government buildings, structures of brick in a frame-work of wood, are situated on the South side of James' Bay. They comprise a central building, with Treasury and Land office, Court House, and Register office appended.

The only other public edifices are the Jail and Police offices, built of solid stone work.

Several ship building yards have been established in the harbour, and many small river steamers have been launched.

A Foundry also supplies the wants of the community, and affords means of repair to the machinery of coast and ocean steamers.

Among the public places of amusement may be mentioned a Theatre and Lyceum, a Library associated with a "Literary Institute" is spoken of. The Athlete have a Gymnasium, and the admirers of horse racing enjoy their favourite sport, on a very beautiful race-course which runs round Beacon Hill, a promontory overlooking the sea, about a mile from town.

Slightly sketched and briefly commented on, such is the plan and general appearance of the town of Victoria, in the neighbourhood of which, from many points, the views are striking, the landscape at once grand and beautiful.

On a clear, crisp, autumnal or spring morning, from the northern side, a beautiful and interesting scene meets the beholder's eye.

Immediately before and somewhat below him lies the town in repose, the only evidence of life, the thin blue smoke which from numerous hearths floats upwards in the motionless air. The grouping of the houses with the tone of the colouring that prevails is most pleasing. In the first faint light of the morning, the various styles of architecture, assume fantastic shapes, pointed gables and ornamented roofs, standing out, clear and sharp, the shadows dark neutral, the lights cool grey, the whole warmed by the depth of colour of the brick houses and other edifices. Away on the left, in the east, Mount Baker and the Cascade Range have caught the sun's first rays, and a blush of pearly light is stealing over the heavens. The sea, still and unruffled, stretches over to the foot of the great Olympian range, which, clear and defined against the southern sky, stretches its massive dark blue length along, and far on the right, where hang the heavy clouds, night is gathering his mantle around him, and is disappearing in the west.

As the day passes on, and the sun approaches the zenith, the same clear fresh air, plays around, and an elasticity of body and mind is felt by all. The character of the scene has changed, however, a busy hum fills the air, and man at his daily toil. The sea is like a mirror, numerous tiny craft, with drooping

sails, dot its surface, and seem at the same time suspended in the air by the refraction which elevates and brings into view the cliffs at Dungeness, reminding the observer of the chalk cliffs of old England.

The mountain range has become a cloud land, stretched along mid-way, are lengthened lines of strati, drawn clear and sharp against the heavy dark blue mass, while, piled heap upon heap, resting on the lofty summits, are masses of cumuli and cumuloni, seeming fit abode for the Olympian Jove. As the sun goes west, cirri and cirro-strati begin to float off into the upper air, and before the warm westerly breeze, the wondrous cloud land disappears, the light is reflected in sparkling rays from the waters of the winding reaches of the upper harbour, the shadows become purple, and in the pine woods black. The whole sky on the right, is one blaze of crimson and deep orange hues, and as the sun sinks in the western ocean, he pours a flood of yellow light along the narrow strait, such as Turner would have loved to paint, touches the Olympian peaks with a rosy hue, and resting for a moment on the summit of the tower on the Race Rocks, with a golden gleam, seems there to leave "the Flashing Light," the seaman's safeguard against the dangers of the night.

Esquimalt, a village or hamlet, prettily situated in one of the numerous coves of the excellent harbour from which it takes its name, derives its support from the presence of Her Majesty's ships, and from the mail steamers which here land their mails and passengers, these towns are connected by a good, new, waggon road, which has just been completed.

Its capabilities as a harbour, and the probabilities of its being a place of great importance have been already stated. The position is unrivalled as the site of a magnificent town, about a mile on the road to Victoria, a most favourable position, with a light sandy and gravelly soil existing.

The town of Nanaimo has been also alluded to, it possesses, at present, chiefly a mining population, but is the nucleus of a great town, the centre of a cultivated agricultural district.

The Government of Vancouver Island is vested in a Governor appointed by the Queen, in a Legislative Council and House of Assembly.

The Legislative Council is composed of five members, nominated by the Governor.

The House of Assembly consists at present of thirteen members elected by registered voters.

The following list will show the areas in square miles of the towns and districts returning members, with the number of voters in each:

Name of Town or District.	Area.	No. of Voters.	No. of Members.
Victoria Town.....	3 sq. miles	.....331	..... 2
" District.....	13   "	..... 97	..... 3
Esquimalt Town.....	1   "	..... 50	..... 1
" District.....	21   "	..... 61	..... 2
Nanaimo.....	80   "	..... 32	..... 1
Lake District.....	25   "	..... 57	..... 1
Saanich ".....	37   "	..... 29	..... 1
Sooke.....	25   "	..... 15	..... 1
Salt Spring Island ...	95   "	..... 29	..... 1

The House of Assembly, presided over by a Speaker, is elected triennially.

In the Appendix No. 6 will be found a list and abstract of the Acts passed since the beginning of the first Session in March, 1860.



A Colonial Secretary and a Colonial Treasurer preside over Special Departments, an Attorney General, a Registrar General, and Clerk of the Writs, complete the staff.

The JUDICIARY of the colony dates from an order in Council of 4th of April, 1856, when Her Majesty "did constitute a Supreme Court of Civil Justice of the colony of Vancouver Island, with a chief justice of said court, a Registrar of said court, and a sheriff of Vancouver Island." "And Her Majesty did further authorize and empower said Supreme Court to approve and admit Barristers and Solicitors, the former to be members of the Inns of Court of England and Ireland, or Advocates in the quarter Sessions of Scotland," &c., &c.

By Patent from the Governor the functions of the Chief Justice are extended to criminal matters.

The common law of England is in force as were also the statutory laws, up to the time a Legislative Council and Assembly were given.

There are two branches of the Supreme Court, viz "the Supreme Court" and the Summary or Inferior Court.

The former has original Jurisdiction in all matters involving the recovery of a sum exceeding fifty Pounds with an appellate jurisdiction from its inferior branch to an amount of £50. The inferior branch has an original jurisdiction in all matters up to £50. The Chief Justice also acts under Patent from the Governor as Judge of the vice-Admiralty Court of Vancouver Island.

There is a Police Magistrate with an efficient constabulary force. Four or five persons hold commissions as Justices of the Peace, whose duties are confined to Victoria and Esquimalt. There is also one for Nanaimo and one for Barclay Sound. There are three practising Barristers and four practising Solicitors.

Taking into consideration the nature of the population of Vancouver, varying as it does through every degree of civilization from savage life upwards and amongst representatives of nearly every nationality under the Sun, it would not be a matter of surprise if the STATISTICS of CRIME, in a colony so situated, were found to be large in their relative proportions.

But, as shown by the abstract of charges against convictions and sentences, Appendix No. 7, for a period of years, these statistics, when weighed by the number of charges are found to be in no way remarkable, and certainly show a smaller amount of crime than might have been anticipated.

The charges before the Police Magistrate resolve themselves into the following categories, viz., Misdemeanours, Common assault, Assault with weapons, Larceny, Felony, Selling Spirits to Indians, Recovery of Wages, Desertion. In the year 1859, the charges under these heads were 1048, of these 832 were convicted, 316 acquitted. 1860, in this year, charges were 758, convictions 548 acquittals 230. In 1861, up to June, there were 399 charges, 306 convictions and 93 acquittals.

An examination of the calendar shows that the crimes brought for trial to the Assizes, were Murder, Larceny, Perjury, Burglary, and obtaining goods on false pretences.

From Nov. 1860 to Nov. 1861, the cases tried of all classes, numbered 51, of these 18 were convicted, sentence of death being in no case carried into execution during that period, the severest sentences being 18 months and two

years' imprisonment with hard labour, 33 cases were discharged either through acquittal, or "no prosecution" during the present year.

THE DIFFERENT RELIGIOUS DENOMINATIONS are thus represented in Vancouver Island. Church of England, Church of Rome, Wesleyan, Congregational, Presbyterian, and Hebrew. The Episcopal Churches are each under the superintendence of a Bishop, with efficient staffs of Parochial and missionary Clergy. The other Congregations are very ably directed, and are under the spiritual guidance of earnest, intellectual, efficient Pastors. The Hebrew community has many members.

The great majority of the natives are in a state of heathenism; vigorous missionary efforts are, however, being made by both the churches of England and of Rome to reclaim them—educational being combined with spiritual instruction.

EDUCATION and its cost form considerations of the highest importance, and give serious thought to every parent and guardian of youth. It is perhaps the first care that troubles the anxious mind of the man about to emigrate, about to expatriate himself, and perhaps cut off from his children those advantages which he himself has enjoyed, and of which he knows the value. He looks back to the days of his own hopeful youth and pupilage, and earnestly desires for his offspring, the same if not greater educational advantages. And knowing how much their moral and intellectual worth, will be influenced and affected by suitable means of mental culture, he naturally looks around when seeking a new home, for one which will provide the great blessing of a good education for his family.

In this important respect the Colony of Vancouver Island is peculiarly favoured. The value and necessity of a good sound education has been fully recognised, and in Victoria the means of obtaining this inestimable blessing, meet the requirements of all classes; they are in fact equal to the ordinary facilities of the largest communities in Great Britain.

A system of District Schools inaugurated by the Hon. Hudson's Bay Company, and for a time meeting all the wants of the community, exists in the colony.

The capabilities of these schools as a means of instruction are well shewn in the interesting report, by the Rev. the Acting Superintendant (appendix No. 8.) The establishment of an educational system on a broader basis is now, however, contemplated.

A Collegiate School for boys, and a "Ladies College," have been established in Victoria—the former conducted by Clergymen, men of high scholastic attainments; the latter, by Ladies, devoted to their important duties.

An examination of the "Published Prospectus" of these admirable institutions, as given in Appendix No. 3, will better show the nature and scope of the course of instruction than any description can, and guaranteed, as these schools are, by the high respectability, and distinguished scholarship which superintend their interests, no man need fear but that the mental requirements and endowments of his children will be met, and find expansion in the Colony of Vancouver.

The Roman Catholic Church has, under the direction of its Bishop, a very efficient system of schools. A girls' school presided over by Sisters of Charity was established in 1858, and a boys' school was opened in the following year.

The missionary efforts of this Church amongst the heathen are very praiseworthy, and their schools are well attended.

An independent Institution, called the Central School, conducted on the Canadian system, has lately been opened.

Sunday Schools are conducted by ladies and teachers, members of the different churches. There is, on all hands, a general recognition and just appreciation of the incalculable benefits and advantages to be derived from a liberal and religious education, and there is no doubt but that as the Colony advances, so will the educational institutions expand.

The Literary productions of the colony are at present limited to two daily newspapers, which have each a weekly as well as daily issue. The *British Colonist* and *Daily Press*, are the two enterprising papers which represent the "Fourth Estate." The former was started in December 1858 as a weekly paper, in May, 1859, it was published three times a week, in July 1860, five times a week. In January 1861, it became a daily paper with a weekly issue. The original circulation was 200, the daily and weekly together (according to editorial statement) now number 4000. The prices charged are, for the daily, £2 0s. 0d. for the weekly, £1 4s. 0d. per annum.

The *Daily Press*, was started on the 9th of March, 1861, as a three-times a week paper, but after a month found it necessary not only to enlarge but to issue daily. It has a semi-weekly issue for British Columbia and foreign circulation.

It is worthy of note, as shewing the interest taken by all classes of the community in literary and scientific pursuits, that a series of Winter Evening Lectures are now being delivered once a fortnight in Victoria. The subjects lectured on up to this time are "Poetry," "History," "Popular Novelists," "Geology," "Chivalry," "British Civilization," and the programme contains further, "Mineralogy," and "Reminiscences of a Military Chaplain." These lectures have been generally well attended.

A belief in the salubrity of the climate of Vancouver was long ago expressed, and the experience of the last few years, when an increase of population has given a better means of judging, has amply confirmed the impressions and assertions of those who first became acquainted with the region. No endemic disease is known, and the only epidemics that have as yet visited the Island have been Influenza, Small-pox (amongst the natives), and the milder forms of infantile diseases—such as Measles, &c., &c.

With such a population, however, as is to be found in the neighbourhood of all gold regions, especially where the deleterious nature of the alcoholic drinks indulged in and the licentiousness of the surrounding savage life which prevails, are taken into account, it is not to be wondered at that even in this the most salubrious of climates, much disease and misery should exist. With the exception however of the diseases induced by and accompanying the above forms of vice, the list of "ills that flesh is heir to" is in this country, small, and confined chiefly to pulmonary and rheumatic affections. These occur in every degree of intensity and variety of complication, all, however, amenable to treatment, except in constitutions undermined by syphilis and poisoned by alcohol. These affections of the respiratory organs, pneumonic, bronchitic, and pleuritic, are due no doubt to sudden alternations of temperature acting on debilitated frames, and the rheumatic affections, irrespective of the special

character which distinguishes most of them, to undue exposure to wet and cold.

The remarks already made on the peculiar nature of the climate of the south-eastern extremity of the Island, will readily explain to the inquirer the reason why at Victoria such diseases should be the prevalent types; the hot sun and cold winds of the summer and autumnal littoral climate, and the humid winter season, shew the atmospheric influences which are in operation on the human frame. At the same time it must be borne in mind and kept in view, that these causes by no means exist in equal force all over the Island, and that their injurious influence is exerted only on constitutions debilitated by previous disease or by intemperance.

The statistical returns from one of Her Majesty's ships lying in the harbour of Esquimalt, give, during a period of twelve months a fair criterion by which to judge of the nature of the climate in so far as regards its salubrity.

Excluding from these returns all such cases as are due to accident or other causes not purely climatorial, it is found that out of a ship's company numbering on an average about 500 men, there were entered on the Sick List during that period of time, two hundred and thirty-three cases of slight catarrhal affections—of diseases of the nervous, respiratory, and digestive systems; for rheumatism and all such complaints, in fact, as can be fairly regarded as being attributable to, or materially influenced by, climatorial agencies.

Of those cases of sickness two hundred and five were discharged to duty, twenty were sent ashore for the benefit of hospital treatment, all but one recovering, and eight were invalided either as incurable or requiring hospital treatment in England.

At a first glance, the above list, taken relatively to the number of individuals comprising the ship's company may appear large, but a consideration of the nature of a military service will shew that its aggregate of sick will always be *numerically* larger than that of a corresponding community in civil life—since, from the nature of the service, men who could do an ordinary day's work ashore, must be entered on the sick list simply from inability promptly and quickly to perform their duties; the best criterion, therefore, of the gravity of the attacks occurring under the above different nosological categories, will be found in the aggregate and separate number of days' sickness; 1818 in the former, giving an average of seven and one-half days' sickness for each case, but one death (at hospital,) most of the cases invalided being subjects of originally debilitated constitutions, and aged men suffering under chronic diseases. The whole state of the case amounts to seven or eight days' slight illness in the year from feverish colds, coughs, and rheumatic complaints, in 233 cases out of about 500 men.

The medical profession is represented by practitioners from various countries, the field is quite open to all or any qualification, no legislative enactment existing for the protection of the duly educated and legally qualified medical man, nor, in this important particular, for the community at large.

An Hospital, originating in the benevolent exertions of the Chaplain to the Hudson's Bay Company and the Police Magistrate of Victoria, was established temporarily in a small building in the Town of Victoria in the year 1858. In

the summer of the following year, a building capable of providing accommodation for twenty patients, was erected by His Excellency the Governor on the Indian Reserve, at an expense of between £400 and £500. The institution thus established is supported by subscriptions and donations, and is under the management of a Committee elected annually by the subscribers, the medical care and supervision being vested in one or other of the resident practitioners in Victoria, who, alternately, take monthly charge.

Since the opening of this hospital 350 patients have been admitted, and an equal number of out-door cases have been treated. The diseases have been of a general character, such as are met with in all communities, the majority being acute and sub-acute forms of rheumatism with its various complications, chest affections, and a few cases of paralysis.

The great proportion of cases have done well, but the "locale" of the hospital is bad for chest or rheumatic complaints; situated on a promontory washed by the frigid sea water and exposed to the bleak spring southerly winds, the patients make but a lingering convalescence.

This is the only public charitable institution, and it is specially intended for the care of the sick needing shelter, surgical and medical treatment; but for the provision of the distressed, to the high honour of the community be it said, no special institution is required; an open handed charity pervades all classes, which cheerfully affords assistance to honest poverty, or soothes the sorrows of unlooked for misfortune.

It has been stated to be the intention of the Imperial Government to establish in Vancouver a sanatorium for the restoration of the health of invalids from the forces serving in India and China—the plan if carried out will be found to succeed admirably. For all diseases of functional derangement and nervous debility the climate is most suitable, eminently partaking of that great qualification remarked some two hundred years ago of England, by a Royal personage, a keen observer, "A climate that a man can be out of doors in every day of the year." Even for chest affections many most desirable localities can be pointed out; undulating land, sheltering hills, gravel soil, fragrant pine woods, fragrant even to oppressiveness in the balmy northern breezes of summer. Removed from the sea-coast the sudden alternations of heat and cold would in a great measure be avoided, and the open out of door life, so generally pursued in new colonies by all people, would soon set up the shattered frames of invalids from the tropics, restore the weakened nervous power and remove hepatic and other obstructions.

The energy, the bustle of the struggle of life going on around him, would rouse the dormant mental powers of the hypochondriac; while the new scenes, the new views of life and of human nature which forcibly strike the observer in all young colonies, would give a wholesome action to his mind, and a healthful tone to his frame.

Such an institution as here spoken of could be nowhere more conveniently or advantageously placed than in Vancouver Island. The only drawback would be the temptation to desert owing to the proximity of the gold fields.

**AGRICULTURE, HOLDINGS OF LAND, &c., &c.**—The soils which are found on Vancouver Island have been already described as consisting of sand and

gravel deposits, of sandy loams, some of them calcareous, and, in many places, of a very rich deposit of humus or vegetable mould overlying a subsoil of retentive clay.

The origin of these soils is due to the sands, gravels and clays of the boulder drift, to the decomposition and disintegration of the bed rocks, and to the decay of vegetable matter growing on the surface.

The land already taken up and occupied is held by companies and private individuals, the chief holders being the Hudson's Bay and Puget Sound Companies. It is distributed in larger and smaller portions, the above companies holding respectively 7,000 and 2,000 to 3,000 acres. These companies and individuals hold by purchase, originally at the rate of £1 per acre, but this, however, has been since reduced to an upset price of one dollar, or four shillings and twopence per acre. There are holdings of land from one hundred to four hundred acres, a few amount to upwards of one thousand acres. There are also many farms of from forty to one hundred acres enclosed and under cultivated grasses and rotation crops. Lands occupied by tenants are generally held by agreement from year to year, and rents are paid in money. In all farming operations the same tools and implements are made use of as in Great Britain. In preparing the land the following measures are necessary and generally adopted: 1st—Boulder and other loose surface stones are carefully removed, and for this as well as clearing the land of stumps, Indian labour is available. 2nd—It is necessary to clear the land, with pick-axes, of bedded boulders, the presence of which would not be known until the plough came in contact with them. Ditching and draining are the next steps, and the land is then broken up by the plough with a yoke of bullocks, which are much preferred to the horses of this country on account of their steadier draught.

The land is now left as a summer fallow until the early part of October, when the grain is put into the ground. The crops generally raised are—wheat, barley, oats, and peas. The green crops are—turnips (Swedes), mangel wurtzel, vetches, potatoes, and all kinds of vegetables; cabbages, and pumpkins, attaining a very great size. Of the cereals, wheat does best; of the leguminous plants, peas are the most profitable.

Nowhere does the potato flourish more, or attain a better flavour; it is grown in great quantities by the natives on all parts of the coast. The Hydah Indians of Queen Charlotte's Island hold an annual potato fair, customers reaching them from Fort Simpson on the mainland.

The rotation of crops in virgin soil is—wheat after fallow, then a crop of peas, wheat again or oats, and then a fallow is made for turnips, and by this time the land will be pretty clean. After turnips, a crop of barley or oats, [spring sown], is raised and followed by potatoes, the land being well manured and thus mended. After this, farming operations are conducted on the same rotation four course system as in Great Britain.

Threshing is done by machine, but in some cases the flail is still used.

The average production of wheat is twenty-five to thirty bushels per acre, 64 lbs. to the bushel; of oats, forty bushels per acre, weight 36 to 46 lbs. Potatoes two hundred bushels per acre, and of very superior quality; all vegetables

succeed much better in Vancouver than in Oregon or Washington Territory. The following are the usual quantities of seed sown per acre:—of wheat one and a half bushels, barley two and a half, oats two and a half to three bushels, peas two to two and a half bushels, vetches two and a half. The yield of barley varies according to the cultivation of the land from 24 up to 40 bushels per acre.

All fruit trees bear profusely and the fruit is of the finest quality.

The animals employed in the field and farm yard, are horses, oxen and mules, the latter being of great and special value. Pigs are easily reared, and poultry also.

Sheep generally do well, the South Down especially, which do best, the Merino sheep being too loose in the wool to suit the wet winter climate.—Fleeces are light, the quality of the wool good. The meat is excellent, of the finest and most delicate flavor—fit to kill at two years old. There are about 5000 sheep on Vancouver and the neighbouring Islands. The annual increase is about 90 per cent. Lambs are dropped about the beginning of April—a favourable season, and little loss is experienced, except from the occasional attacks of native dogs or wild animals. Some of the finest South Down Rams have been imported at a great expense by the Hudson's Bay, and Puget Sound Companies.

Large herds of cattle exist in the mountains in a wild state, having strayed from the different farms and settlements.

Agriculture is progressing and is looked on most favorably, kept back at present, only by the scarcity of labour, and consequent high rate of wages, and by the want of roads.

An Agricultural and Horticultural Society has been formed, and was very successfully inaugurated in the autumn of the present year. The first exhibition was held in October, prizes being awarded to the exhibitors of the best horned cattle, sheep, stallions, and brood mares, (thorough bred and for farming purposes) and also for pigs. Amongst the cereals—for wheat, barley, and oats, and amongst the leguminous plants for field peas; of the root and leaf-plants—for swedish and bullock turnips, parsnips, mangel-wurtzel, carrots, beets and potatoes, cabbages, squashes, celery and tomatoes.

Fruit culture will prove a valuable and paying branch of industry. In this particular the capabilities of Vancouver Island excel those of the continent; and this may prove an article of export, though agricultural products generally never will.

**CURRENCY.** The chief difficulty to be met with in the matter of the currency is the fact, that the legal money of account, viz: £ s. d. is insufficiently represented by coins, so that a legal tender for any large amount, having fractional parts of a pound sterling can hardly be made.

As the law stands at present, this difficulty can only be removed by coining, or else importing sterling coins, either of which proceedings would be expensive, the former would not cost less than 4 per cent., the latter about 7 per cent.

The only other method of removing the difficulty, would be to declare the dollar legal money of account as well as the pound sterling.

One of the greatest obstacles in arranging the currencies of the Colonies, has invariably arisen out of the anomaly of the money of account being of a different denomination from the coins in circulation. And the experience of other British Colonies shews the necessity of adopting for Vancouver as the money of account, that denomination which is best represented by coins, or at least adopting both systems—as the legal monies of account.

That Vancouver is at liberty equally with other British North American Colonies, to adopt the latter plan, there cannot be a doubt. The intrinsic par between the two currencies, which is acknowledged all over the continent of North America, including the British Provinces, is  $9\frac{1}{2}$  per cent. premium on the old Federal Par. and is thus calculated.

	£100 0 0 sterling.
Add one ninth	11 2 3
	<hr/>
	111 2 3
Multiply by	4
	<hr/>
	\$444 44 Federal Money.
Add nine and one half per cent.	42 22
	<hr/>
	\$486 65
	<hr/>

This Par of exchange is verified by reference to the coins, thus  
 British sovereign contains 113 25-1000  
 grains fine gold.  
 American half Eagle “ 116 1-10 grs  
 fine gold.  
 Hence, 113 025 : £1 0 0 :: 117 100, or, 116.100: \$5 :: 113.025  
 )115.100(1.027—£1 0 6½  
 113.025

307500  
 226050  


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 814600  
 791175  


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5  
 565.125(4.86  
 464.400  


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 1007250  
 928800  


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 784500  
 696600  


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\$5-£1 0 6½ £1 0 0-\$4 86

The present fictitious par of \$5 per pound sterling, has a tendency to inundate the circulation of the Colony with depreciated sovereigns, which have long been in circulation on the Pacific coast, in Australia and elsewhere, and this will ultimately tell against foreign exchange, if these coins are not replaced by new sovereigns. Account sales are invariably rendered in dollars and cents, and to the commercial community it is of great importance that it should continue to be so, preventing general inconvenience in the trade between this and neighboring American states, which is very large and rapidly increasing.

About thirty per cent. of the sovereigns, in circulation in this colony of Vancouver, are under the legal weight, which is equivalent to a deduction of one and a half per cent. at the Bank of England.



At the aforesaid Par the different coins would stand relatively thus :

£1 0 0—\$4.866	Or, £2 1 1½—\$10.
0 10 0— 3.433	1 0 6½— 5.
0 1 0— 0.243	0 10 3½— 2.50
0 0 6— 122	0 4 1½— 1.
0 0 1— 020	0 0 0½— 0.01

CAPITAL commands a high rate of interest, 25 to 18 per cent. per annum can be obtained on the *best* securities. The great want of Capital is shown by the fact, that on one occasion, Government requiring money, even on such security it could only be obtained at the rate of 24 per cent. per annum for four months.

The interest of money and increased value of investments in property, have since 1858 realized from 15 to 30 per cent. per annum.

Any person coming out to this colony and bringing from two to three thousand pounds can obtain for that sum from £300 to £400 per annum by putting out his money at interest on good security.

The weights and measures of the colony are Imperial, though in practice the American gallon which is one-fifth less is frequently used *by agreement*.

Public feeling is strongly in favour of a decimal currency. Accounts are kept in dollars and cents, by wholesale as well as retail dealers. Government alone keeping accounts in £ s. d.

TRADE AND COMMERCE.—Possessing at Victoria a Free Port, the Colony of Vancouver enjoys an immunity from all restrictive duties on trade and commerce, and, considering her geographical position, nothing could have been more wisely determined on. For, great as are the inducements to agriculturists of a certain class to come and take possession of the virgin soil of the fertile valleys and plains, yet it must always be remembered that these at the best are but limited, and that agricultural pursuits must *per force* take a secondary position to those of trade and commerce in the colony of Vancouver.

Situated as it were on the highway between two great gold producing countries, her capital Victoria, the sea-port of the vast regions of British Columbia, serves as a depôt or medium for the interchange of commodities.

Already the influence of Victoria as a commercial depôt is felt in Oregon and Washington Territory, and is now being acknowledged in California.

A San Francisco newspaper—*L'Echo du Pacifique*—of this year, thus states the case: October 30, 1861—"Heretofore goods might remain in bond three years without paying duties; now the term is restricted to three months, and as consignees are not always disposed to pay the large amount of duties they would be called upon to advance, the above restrictive measure will have the effect of throwing this business into the hands of parties in some other place, where the laws are more liberal. Commerce has neither country or affections, all it wants is freedom, if that is taken from it in one place, it will seek it in another.

"For this reason it would appear that Victoria, a Free Port, will profit by what San Francisco will lose, as the shipper will find there the advantages which are refused to him here, and there (*i. e.* Victoria) will be the depôt of the Pacific Coast."

It is stated that the French merchants of San Francisco in the prospect of

having to pay these duties, contemplate directing their next importations to Victoria; these facts speak for themselves.

The chief argument brought forward by those who advocate the abolition of the present Free Port system is based upon the belief, that no country can continue to prosper or become wealthy, without agricultural resources. And accordingly, protection has generally been extended to the agriculturist.

However applicable the principle may be to a country having within itself all the elements of self-support, it does not carry with it the same weight or importance, when applied specially to the development of the resources of Vancouver Island.

The agricultural portion of Her Majesty's dominions on this side of the Rocky Mountains, has been unnaturally and unwisely severed from what is destined to be the mercantile and manufacturing districts.

This is self-evident if the geographical position of Vancouver Island, forming as it does the natural sea-board of British Columbia, is considered, thus, with the navigation of the Pacific, commanding mercantile facilities, while her extensive coalfields will necessarily attract manufacturing population and capital.

It can never be for the good of the agricultural interest to discourage the industry of the larger—the mercantile class of the community—because the greater the facilities granted to the trading population, the cheaper will the farmers be supplied, not only with foreign goods, but with the manufactured produce of their own country.

Under a Protective Tariff, the agriculturist will not necessarily enjoy a high price for his produce. He will have to pay higher taxes, because the proportion of farmers to the commercial class, will always be small in Vancouver, and the oppression of the interests of the larger class, will fall heavily on the smaller, as well as on the individual.

If the agricultural interests suffer from the present Free Trade system, they would languish and die if commerce were discouraged; their markets would be altogether removed by the withdrawal of mercantile capital and population. Whatever encourages commerce, directly encourages agriculture.

British Columbia has great mineral wealth, and abundant agricultural resources. Vancouver Island has great mineral wealth, agricultural resources, and vast commercial capabilities. Her *ultimate* destiny is clear—it is nothing less, than to be the great commercial mart of the world, to supply the Pacific with the manufactures of the world.

A purely mercantile or manufacturing country can generally procure food at a cheaper rate from one that is devoted to agriculture than she can raise it for herself, and the only disadvantage arising from this division of labour, would be the danger of war cutting off the supplies.

The relations which exist between Vancouver Island and British Columbia, prevent the possibility of such a contingency, and the special capabilities and resources of the two Colonies clearly shew their mutual dependence upon, and relation to, each other.

The scope of this essay does not admit of a full consideration of the whole bearings of the case, and the great and manifest importance of the immediate

junction of the two Colonies which might be earnestly urged, can be here only incidentally alluded to, when treating of the trade and commerce of one.

The Imports and Exports of a country generally furnish the means of estimating and setting forth the extent and nature of its commerce, but Victoria being a Free Port, no account of the latter is taken, and it is impossible to arrive at any correct estimate of the amount of gold, furs, skins, hides, wool, exported—these, with whale, seal and fish oils, coal, lumber, and spars from [various parts of the insular coast line, being shipped off annually, in great and increasing quantities.

The Imports, however, shew the amount of foreign trade, and the British Columbian imports from Vancouver, with the returns under the "Trades License Act," give an approximate ratio of the amount of business done in the home or colonial trade.

The aggregate value of goods imported into the Colony of Vancouver for the period of twelve months ending 30th June, 1860, was £499,178 4s. 0d.

For the twelvemonths ending 31st December, 1861, £400,113 0s. 0d. (for particulars, see Appendix, No. 10.

In 1860, the value of goods exported to British Columbia from Victoria, amounted to £201,712 13s. 6d. as per abstract of Imports into British Columbia, Appendix No. 11, the list comprising all classes of goods and commodities of life.

Under the Trades License Act, of 1860, returns are made half yearly, of the amount of business transacted, (as per act, "shall pay half yearly an assessment upon the actual amount of the money, or equivalent for money, which, during the three calendar months next preceding, shall have been received,") by merchants and traders of all classes, and, according to the scale already referred to under the head of "Employment of the People," a tax is imposed by Assessors appointed for that purpose, the amount of which tax must be paid into the treasury within ten days of the final passing of the assessment by a Board of Revision.

The Returns are for the quarter—the tax for the half year.

According to these returns, it will be seen that for the three months ending 31st December, 1860, the amount of business transacted was £205,035.

For the three months ending June 30th, 1861, £108,150.

For the three months ending December 31st, 1861, £195,880.

The analysis appended with these returns gives a clear view of the nature of the home trade as applied to the Colony, which is chiefly retail, but is not confined to residents in the island, purchasers from all the settlements in the Sound, (Washington Territory) being among the best customers that tradesmen have.

The wholesale trade is cramped and limited in consequence of the deficient supply of goods, which are for the most part sent out in vessels of a very inferior description, making long voyages, and often bringing damaged cargoes.

As already stated, no account of exports being taken, it is difficult, impossible, indeed, to arrive at anything like a correct estimate of the amount of the most important item, viz. the gold in dust and bars brought to, and ultimately shipped from, Victoria.

The gold is brought from British Columbia to Victoria by the miners, and there a small portion is sold, but the great bulk goes to San Francisco, as does ultimately that portion purchased in Victoria.

In 1860, the value of the gold obtained from Cariboo and other diggings in the upper country of British Columbia, was computed at a million sterling. For the present year, 1861, nothing to be relied on as to the quantity produced, can be ascertained, but not less than twice that amount must be taken as the lowest computation.

Cariboo coarse dust is sold in Victoria at from \$15 50 to \$17 50 per oz. Amalgam gold on the Fraser River, at from \$14 to \$15 per oz. Were it properly retorted, which it is not, this gold would be worth \$17 per oz.

The coarse gold found on the western side of the Blue Mountain range, (the Cariboo gold range), is less valuable than that found on the Eastern side, lying between the above range and the Rocky Mountains. This inferiority is owing to the quantity of silver mixed with it, and it only fetches from \$15 50 to \$16 25 per oz.

The finest gold of all has been found in Lightning and Nelson Creeks—averaging \$18 50 in the bar, some of it as high as 920 "fine," about 22½ carats. Some of the fine amalgam gold on the Fraser River, runs as high as 900 "fine."

The gold assayed in Victoria, and run into bars, is ultimately sent to California, and generally sold at a discount of between 2 and 3 per cent. on stamp "on bar." This discount is owing to the scarcity of coin. If there were sufficient coin in the place, the bars would be sold at about one per cent. discount, to cover rate of exchange or coinage, at the mint of San Francisco, or in Victoria, did the place possess such an establishment.

The establishment of a mint in Vancouver Island, is a vexed question; in some respects it would increase trade, especially in so far as dealers in gold and assayers are concerned, being at the same time an advantage to the miner by saving one or two per cent. discount, and it would undoubtedly tend to improve Victoria and Vancouver generally, by increasing population. If there were coins to purchase gold, that metal would be bought and transmitted by merchants as cash in payment of goods, and so, differences in rates of exchange would be saved. The gold thus retained for a time, would of course ultimately be taken away. The only permanent retention of that metal in the shape of coin, will depend on and follow the development of the agricultural and manufacturing resources of British Columbia and Vancouver Island.

The mint in San Francisco, charges one quarter per cent. for assaying, and one-half per cent. for coining, three-quarters per cent. in all, making a return of the silver which they part. The returns are made in from 12 to 15 days, and the silver generally found in Californian gold dust pays for assaying, so that the total expense is only one-half per cent.

For assaying in Victoria, the charge of one-quarter per cent. is made on all sums above 50 oz. Silver is not parted; the purchaser of the bar (stamped intrinsic gold value), getting the benefit of the quantity of that metal therein contained. Thus, a bar bearing 800 on the face of it, purchased in Victoria at 2 per cent. discount, and sold in San Francisco when the *par value* is 850

"fine," would be making  $\frac{1}{2}$  per cent. on the face of the bar. And if the same party were purchasing a bar 900 "fine," and selling it in San Francisco at the same par value (850 "fine,") he would be losing a half per cent.

Par value is explained in this way—If par value in San Francisco be estimated by bankers and others drawing drafts, at 850 par, all bars under that stamp of "fineness," stand at a premium. 825 "fine," would be one-quarter per cent., 800 "fine," half per cent., and 750 one per cent., because the amount of silver in the bar increases as the "fine" number decreases, and this premium is paying the silver in the bars.

On the contrary, the bars increasing in fineness would be at a discount, because, beyond 850 par, there is not silver enough to cover the rate of exchange. Sometimes the bars run up to 910 par, when the demand is heavy.

One of the Assaying firms in Victoria, assayed and melted 750 ounces of gold weekly between the months of March and September of the present year; in October, of Cariboo gold, within a fraction of ten thousand ounces was melted. Another assaying firm has done much the same amount of business.

As already stated, it is impossible to arrive at any just estimate of the amount of gold brought to Victoria this year; when successful, the miners' usual rule is secrecy, and the want of coin in Victoria for the purchase of the "dust," has compelled them to take a great proportion of it to San Francisco. One enterprising firm alone, from August, 1858 to the present time (December, 1861), has shipped to San Francisco gold dust and bars to the aggregate amount of \$3750,111 30—equal to £750,022 4 3; the details are given in Appendix No. 12.

It is calculated that next year at least five times the number of miners will be assembled at the gold fields, and full ten times the amount of gold extracted. A party of seven men with the money they made at Cariboo, lately left Victoria for San Francisco to buy 600 head of cattle and 1000 mules with which to return to British Columbia in the spring. Such preparation for exigencies likely to arise, affords a good indication of what the probable increase of population will be during the ensuing season.

BANKING, &c.—Discounting is not in fashion with the bankers of Victoria. The exchange business is chiefly with San Francisco; drafts on Portland, Oregon, U. S., are also frequently in demand; the trade in exchange is increasing steadily, and will do so still more, especially if a direct route by steamships is opened *via* San Francisco to Panama.

United States drafts are frequently in the market, and can be bought at a discount of 2 to 5 per cent.

Government and Navy Bills are sold at from 1 per cent. discount to 1 per cent. premium, and remitted to England. They form the basis of nearly all the exchange required. Coin is wanted for both these descriptions of exchange; it is scarce, as it can generally be better employed in buying gold dust, drafts on Portland and San Francisco.

The Bank of British North America receives deposits for which a charge is made of one-fourth per cent per month. It draws on the principal commercial places in Canada and in Europe, issues notes of Exchange, and discounts a little; but does not buy gold dust or bars.

There is one other Banking establishment—McDonald & Co.—doing busi-

ness in much the same way, but purchasing gold dust and bars, drawing on San Francisco and London.

The House of Wells, Fargo & Co., in Victoria, do a Banking and Exchange business. They buy and sell Exchanges, and gold in bars, drawing on San Francisco and other principal places. The amount of gold shipped by this firm since August, 1858, has been given above.

One great addition to the exports will be found in copper ore, late discoveries of which in Queen Charlotte's Island to the north, and at Barclay Sound in the southwest of the Island give excellent promise of valuable lodes; affording the means of stimulating industry and extending commerce.

Such, rapidly sketched, is the state and condition of trade and commerce in the Colony of Vancouver, a state and condition at once surprising and gratifying, when the youth of the Colony, and the many drawbacks consequent on distance from, and difficult access to, the Mother Country are taken into account. Its present stage of development warrants the sure belief in its great and immediate expansion.

Vancouver, in her commercial relations, has a noble mission before her. As an outpost of the Mother Country, this favored Island offers to the enterprising emigrant, to the true Colonist, who will make it his home, an ample field for all his energies. The centre and focus of trade of the North-west Coast—the natural outlet for the stores of wealth produced and accumulated by the industry of man in the Canadas—Vancouver will, in the coming time, radiate the light of civilization across the whole Northern Pacific, and illuminate the dark and barbarian shores of China and Japan. Ever since the days of the nomadic Celts, the face of man has been turned to the Western sun. The dawn of civilization, for those countries, has arisen in the East on the shores of their own ocean, and civilized man, still looking West, will by means of trade and commerce, carry the enlightenment of the 19th century to those benighted shores, and develop the wealth of the lonely Islands of the North and South Pacific Oceans.

The following interesting extracts from Hazlitt's Work, clearly and concisely convey the opinions of Statesmen, commercial men, and travellers, and show, at the same time, the great importance—political and commercial—of Vancouver Island, while they are sufficiently comprehensive to embody all that need be said of the prospective field of commerce in view.

"Fur Trade." Pamphlet by Mr. Roche.

"Profitable as the fur trade has already been, there is a certain prospect of its value being greatly enhanced by the opening to general commerce of the markets of Japan. In those wealthy and densely populated Islands, where the temperature of winter ranges almost as low as it does in the north of China, direct, and comparatively near markets for the furs, the fish, and probably for the timber of these regions, will ere long be opened out, the importance of which to the latter country it is impossible to overrate. Probably these highly cultivated Islands will be found to be so cleared of their forests that they will afford the most lucrative markets for the valuable timber of North-Western America. In a large portion of China timber has already become very scarce."

Mr. Earl, in his work upon the "Eastern Seas," says, that the junks of the Chinese are generally built in other countries where wood is plentiful. There can, therefore, be no question of the profit of establishing a trade between that country and the North-West Coast, in this staple production of the latter. "The greater portion of the south of Persia, which is wholly barren in timber, and a great part of South America, which is equally so, might also afford excellent markets for the useful timber of the North West Coast."

Mr. Montgomery Martin, writes :

"The position, resources and climate of Vancouver Island eminently adapt it for being the Britain of the Northern Pacific. There is no port between the Straits of Juan de Fuca and San Francisco ; it is within a week's sail of California ; within double that distance from the Sandwich Islands, with which a thriving trade has already been established ; five days' voyage from or to New Archangel, the head quarters of the Russian Fur Company's settlements, where large supplies of provisions are required, and it is within three weeks' steaming distance of Japan."

"This commanding position justifies the expectation that Vancouver Island will become, not only a valuable agricultural settlement, but also a rich commercial entrepôt for British trade and industry."

Sir Bulwer Lytton says : "Already on the Pacific, Vancouver Island has been added to the social communities of mankind. Already, on the large territory west of the Rocky Mountains, from the American frontier up to the Russian domains, we are laying the foundations of what may become hereafter a magnificent abode for the human race. And now, eastward of the Rocky Mountains we are invited to see in the settlement of the Red River, the nucleus of a new Colony, a rampart against any hostile inroads from the American frontier, and an essential one, as it were, to that great viaduct by which we hope one day to connect the harbours of Vancouver with the Gulf of St. Lawrence."

And that great contemplated viaduct is thus ably commented on by a correspondent of the *Times*, who shews, that passing from Halifax through British Territory, for a distance of 3200 miles there would be a gain on the present route to British Columbia, *via* Panama, of no less than twenty-two days. And, in reference to the all important question of postal communication, not only with these Colonies, but also with China and Australia, shews the distances to be from—

Panama to Canton, .....	about 10,000 miles
Vancouver Island to Canton .....	" 6,900 "
Panama to Sydney .....	" 8,200 "
Vancouver to Sydney .....	" 7,200 "

"This proximity to Australia is especially worthy of note at a time when the transmission of the mails across the Pacific is again being prominently advocated. It will be apparent from the afore given distances, that by transmitting the Australian mails from England to the Pacific across British North America *via* Vancouver Island, instead of *via* Panama, a saving of five days is effected between England and the Pacific, and of 1,000 miles, or say five days more, in the passage across that ocean—ten days saved in all"—and on

the same subject Lord Bury states truly, "that our trade in the Pacific Ocean with China and India must ultimately be carried on through our North American Possessions."

To these quotations may be added one from a report furnished to the United States Government by Mr. Aaron H. Palmer, which has especial and particular interest at the present time, when a trade with Russia is being opened through the Amoor River; a trade which may reach the heart of Asia, and even the shores of the Baltic.

Mr. Palmer says:

"The Amoor is the most valuable river in Northern Asia; the only highway of nature that directly connects the central steppes of Asia with the rest of the world. The extent of the rivers which disembogue at its mouth is amazing—the principal towns of Manchuria, and several places in Mongolia, are accessible to them; they extend to upwards of thirty degrees of Longitude. By its position with respect to the sea of Japan, a settlement at or near its embouchure would open a new and most profitable trade with Manchuria, Central Asia, Siberia, the Japanese Islands, Corea, &c."

"There appear to be no insurmountable obstacles to a direct communication being opened between the Pacific and the Baltic, and with the Caspian and Black seas, by the route of this river and the navigable waters of Siberia."

The Revenue and Expenditure of the colony for the year 1861, closely approximate, is shewn by the following abstract:

HEADS OF RECEIPT.				HEADS OF EXPENDITURE.			
Real Estate One per Cent				ESTABLISHMENTS.			
Tax.....	£	5957	3 6	Salaries fixed. £1659	8	1	
Harbour Dues .....		1029	4 4	Salaries pro-			
"    to Harbour fund.		884	4 11	visional and			
Victoria Street Tax.....		2520	9 0	Temporary...	7245	7 4	
Liquor Licenses.....		3393	2 6	Office Contin-			
Trade Licenses.....		2288	0 0	gencies .....	1133	12 11	
Land Sales (including							10,038 8 4
Pre-emption Fees).....		5890	6 10	Administration of Justice,			
Postages .....		310	11 9	exclusive of Establish-			
Fines, Forfeitures, and				ments .....	421	15 5	
Fees of Court.....		1482	15 1	Charitable Allowances.....	600	0 0	
Fees of Office.....		339	3 11	Police and Gaols, exclusive			
Re-imbursement in aid of				of Establishments .....	1394	1 10	
Expenses incurred by				Rent .....	53	10 0	
Government .....		417	12 10	Transport .....	9	16 9	
Miscellaneous Receipts...		178	5 5	Conveyance of Mails .....	914	19 0	
Balance from 1860.....		561	3 9	Works and Buildings.....	315	4 8	
				Roads, Streets and Bridges	5057	4 7	
				Drawbacks and refund of			
				Taxes .....		17 12 11	
				Interest.....	235	18 9	
				Miscellaneous Services....	2344	19 3	
				Advances to Heads of De-			
				partments unaccounted			
				for .....	3625	8 8	
Total.....	£	25252	6 10	Total.....	£25029	0 2	



The amount and kind of taxation in force will be clearly seen under the "Heads of Receipt," and are comprised under the different headings of Real Estate, one per Cent Tax, Harbour Dues and Fund, Victoria Street Tax, Liquor and Trade Licenses.

In the neighbouring Colony of British Columbia, the Revenue and Expenditure, with the imports, for the year 1860, were as follow :

Gross Revenue.....	£83,044 16 11
Total Expenditure.....	£71,859 9 6
Total value of Imports .....	£257,388 0 10
Of this, Vancouver Island alone, sent .....	£201,712 13 6
The Imports from the United States reached the value of	£55,674 16 6
The gold produce in the above year, is computed at one million sterling.	

This present year, 1861, has witnessed the full development of the great wealth which British Columbia possesses in her gold fields. At least the great, the wonderful promise has been seen, the full development awaits the enterprise of the miner for years to come.

The extent of gold bearing debris and gravel, can only be guessed at, but it is known to extend over a very large area.

Besides these extensive gold fields, the other valuable—and economically, most important metals—silver, copper, tin, platinum, and plumbago, have been found. Lignites and other Tertiary carboniferous deposits exist, and valuable building materials abound.

STEAM COMMUNICATION exists with the United States and Europe *via* Panama. At the present time, December, 1861, there is but one steamer every three weeks, and calling at Portland on the Columbia, she does not communicate directly with Vancouver. The mail is brought by this conveyance, and consequent on this divergence is subject to great delays.

The imperative necessity of a direct line of steamers has made itself strongly felt, and the proper steps are now being taken to ensure, as far as possible, this great desideratum. A subsidy has been granted by the Colonial Government, and arrangements have been made by which communication with San Francisco shall take place weekly, each alternate steamer coming direct to Esquimalt Harbour in Vancouver Island.

With the present prospects of the Colonies of British Columbia and Vancouver Island, it is not only of the greatest importance that a direct and speedy Postal Communication should be established, but that also a means of conveyance that shall bring merchants, miners, agriculturists and immigrants of all classes straight to their port without unnecessary and vexatious delay, should be at once made available.

A steamer *direct* to San Francisco will of itself be a great boon, but there ought to be vessels direct to Panama calling at San Francisco, "an intermediate port."

With a moderately swift and convenient relay of vessels such as the South Pacific Steam Navigation Company possesses, the service, aided by subsidies from the Imperial and Colonial Governments, could be quickly, efficiently, and eventually profitably, carried out.

For performing it, no capital or company commands the same facilities

as that above named; with a powerful and numerous fleet of steamships, they have profitably conducted the mail service and both developed and increased the wealth and commercial interests of the whole South American coast.

Possessing at Tabogo (Panama), a regular dockyard and steam foundry, originally placed there with a view to steam communication with Australia, they are in a position to effect what, as above stated, no other company can effect, and which, if undertaken, would, under the present able management, be effectually carried out.

Such an undertaking—the establishment of such a line of steam communication—would be the greatest boon to Vancouver Island, British Columbia, and Washington Territory. From Esquimalt, to which Port, as being accessible at all hours of day and night, the ocean mail steamers must go; a line of small, swift, screw, or paddle steamers, would run to New Westminster and Puget Sound, carrying the mail and passengers with light freight. No line of Ocean Steamers can successfully run direct to New Westminster. The delays consequent on wind and weather, making the land in the dark, threading a passage through the intricacies of shoals, will always deter large vessels which are under *Time* engagements.

Esquimalt Harbour, in Vancouver Island, is the natural—the only safe and available Port, on the North-West Coast of America, for steam mail communication, and when the junction of the two Colonies, at present in such things unnatural rivals, shall have taken place, the great national advantages, possessed by this harbor, in its position safe and commodious, and the wisdom of its selection, will be acknowledged by all.

There are two great objects of vital importance to all Colonies, but especially so to this and the neighbouring Colony of British Columbia, viz. that they should have speedy, direct, and *certain* communication with the mother country, and that the capabilities of the inland, mineral and agricultural districts, should be developed by means of roads and the construction of bridges, and it is, in most cases, the duty of the mother country to provide these, the greatest elements of successful progress, before financially casting off a Colony, “leaving it to develop itself.”

The policy of Great Britain in this respect, has been thus given by an eminent statesman, himself much interested in the successful progress of these Colonies, “For a Colony to thrive and develop itself with steadfast and healthful progress, it should, from the first, as far as possible, be self-supporting.” And this great end is to be attained, by “self-exertion and the noble spirit of self sacrifice, which self-exertion engenders.”

Commenting on this despatch in an able article in the North British Review for August, 1861, the writer says: “The despatch embodying these sentiments may be a very able literary composition, but we must be permitted to doubt the correctness of its reasoning.” And with this opinion, most men who have seen or know anything of Colonies will agree.

Admitting the statement and the reasoning therein contained to be correct, it is, and can be so, only *generally*, and to such exceptional cases as those of the Colonies and British Columbia and Vancouver, can bear no application whatever.

It cannot be right that the only means of communication with the mother country should be carried on from these important Colonies by foreign enterprise, or that the correspondence of the Government and of commercial men should be transmitted in any way by favor of or dependent on a foreign and possibly hostile power.

A liberal sum of money given at once, to subsidize Steam Communication, and to open up the Agricultural Districts of Vancouver Island, would do infinitely more good, and advance the Colony much more materially, than all the noble spirit of self-sacrifice engendered by self devotion is likely to do for a thousand years.

The spirit of self exertion is not wanting, but it is to be feared that sacrifice of any material kind, has rather a depressing effect, a downward tendency.

The position of Vancouver Island, a great commercial entrepôt between two gold producing countries is special and peculiar, events are hurried upon her, preventing self development, a process generally, like a child learning to walk, slow and full of stumbles. Bring her at once into direct steam communication with Panama, open up her agricultural districts, and the consequent prosperous development will be instant and remarkable.

To emigrants of a certain class, the establishment of direct steam communication with Panama would be a great boon, and to many, an inducement to encounter, what for a long time, without such means of transit, must continue to be the great drawbacks to the full development of these colonies, viz.: the distances, the delays, and contingent expenses. That there will ultimately be a route through Canada direct from Europe, no one doubts, possibly one also by the Nicaraguan Lakes; but in the meantime the question is, how to bring, with the least amount of expense, hardship or trial the enterprising emigrant with, it may be, a young family, to his future home.

There are at present three routes—one by way of the West Indies and Panama, another *via* New York and Panama, in each case by steam, and the third, least expensive though the longest, *via* Cape Horn by sailing ships.

There are three great classes of emigrants for whom this Colony holds out special inducements, viz.: the capitalist, the merchant, and general trader. The working farmer, the skilled artisan and mechanic; the practical miner and the labouring man. To the two first of these classes only, are the first named routes open, the expense (speaking generally), being too great for the other classes of emigrants indicated.

From Southampton to the Isthmus of Panama, is a voyage of three weeks' duration, the expense varying from £25 to £44: across the Isthmus by rail, £5; by American steamers to San Francisco, the fare is variable, averaging about £15. From Panama to San Francisco the distance is 3200 miles, and thence to Vancouver Island 800; the fare £10. These fares include provisions for the whole voyage. From New York to Panama is about 1,950 miles, the fares through to San Francisco, \$100 to \$150 and \$200, but variable.

From Europe the voyage will occupy seven to eight weeks; from New York four to five weeks. The voyage round Cape Horn from any part of Great Britain in a first class clipper, the only ship admissible, ought not to occupy more than from 95 to 110 days; and emigrants can be carried from any Euro-

pean port for £18 each adult, children proportionately less. It has its hardships of course, but to most men the sea voyage in a fine ship will be a source of pleasure, an experience of life to be looked back upon and recalled with interest in future years.

EMIGRATION BARRACKS should be built to shelter the emigrant on his first arrival, and to prevent expenses which might cripple his means and cramp his energies.

Immediate employment would be found for all. For the agriculturist the best time of arrival would be in the late autumn or winter months; he would then have the spring and summer before him and thus have a good opportunity of judging of the land, and settling himself before the ensuing winter.

It would be of great advantage to the colony to allot, if possible, unoccupied lands to pensioners, these would form the nucleus of a permanent defensive corps, and with the volunteers would be available on any sudden emergency.

The wives and daughters of these pensioners would supply the great want of the colony, viz: female domestic servants—while the men would to a great extent supply the labour market with a permanent and useful body of labourers. With settled homes and their families around them, these men are the only class not likely to be carried off by "gold fever."

The best means of procuring an agricultural population of the right stamp for this colony and the neighbouring one of British Columbia is by giving *Free Grants of Land*. The offer of such grants will induce many a man to emigrate who would grudge to pay, and probably would not leave his home to pay, even a fourth part of the small sum now charged for land. Other colonies have been for years gathering together a most valuable population by means of Free Grants—and in no colony is it so necessary as in this. Get a working population *at once*, and corn enough will soon be grown on the alluvial plains of the Fraser, and in the fertile valleys of Vancouver, to feed the mining population of the Upper Country and *retain* the produce of the mines instead of allowing it as now, to find its way to California. A great demand for wheat is imminent, let the wheat growers be brought to till the fertile soil now lying waste and useless.

Let an Emigration Agency be established in Great Britain and every means taken to diffuse information regarding these two colonies for it is impossible to separate them.

It is a well known fact that less is known of British Columbia and of Vancouver Island by nine-tenths of the people of Europe than of any other part of Her Majesty's dominions. The gold fields have not been recognized as a "fact," their existence has made no general impression, and that simply because the gold has never made itself tangible, all having been swallowed up by California.

But, as is well known, a railway carried through a new and hitherto remote region, soon develops traffic for itself, so, were an active Emigration Agency at work, and a line of clipper ships advertised to sail regularly for Vancouver Island, would Emigration begin, and once begun the tide would flow on.

**LAND AND ROADS.**—The actual amount of land available for the agriculturist has not yet been ascertained.

The whole area of the Island of Vancouver comprises twelve million acres, the greater proportion of which is mountain and barren rock. There are probably about 250,000 acres of valuable farming land in the districts of Victoria, Saanich, Cowitchan, and Nanaimo. In Comax, an unexplored district, about 300,000, and with other outlying portions, in all, about one million acres available land.

Heavy and very valuable timber now covers many fine districts, which, as they become cleared, will be available for cultivation. The price of clearing varies in different localities, averaging from £6 to £14 per acre.

The richer alluvial soils, bearing willow, alder, poplar, &c., are readily and cheaply cleared by fire, the sandy soils bearing heavy timber, are more expensive and difficult to clear, owing to the great size of the roots of the pine trees. For this however, Indian labour is available, and what is more, the cost of clearing is becoming annually less, especially near to towns and settlements, owing to the increased value of fire wood.

In the agricultural districts, however, there is enough open prairie land for farming purposes, into which the settler can put his plough, and at once raise the much wanted crops, the clearing of the timber from the land, keeping pace with the wants of a farm, for outbuildings, fencing, &c., &c.

The upset price of land is one dollar, or four shillings and two pence per acre. Payment is made by instalments spread over a number of years.

Land may be pre-empted on a system which enables a man at once to settle himself on a given number of acres proportionate to his condition, whether married or single. The former, having a wife resident in the Colony, can pre-empt 200 acres, and for every child under eighteen years of age, also resident, ten acres in addition.

The latter has a right to 150 acres. After two years occupation of the land, on its being shown that improvement to the extent of ten shillings per acre has been made, a "Certificate of Improvement" is granted, which gives full and absolute right to the holder to sell, lease or mortgage, all the rights in fact of proprietorship. Full particulars will be found in the copy of the Act, Appendix, No. 13.

An individual, therefore, having a wife and six children, may pre-empt and settle at once, upon a farm of 260 acres. Abundant material for building rough, temporary dwellings and outhouses are around him, and under his foot he has a rich and virgin soil.

The number of acres of land purchased and pre-empted in the Colony, up to the present time, is approximately: purchased 100,000; pre-empted 3,000.

The number of pre-emptive claims recorded, is 244, of these there are in the Lake District 8, Esquimalt 2, Sooke 4, Metchosen 3, Highland 3, North and South Saanich 22, Cowitchan 68, Somenos 27, Salt Spring Island 52, Barclay Sound 23, Small Islands and dependencies 14.

From various causes, these purchased and pre-empted lands are not yet fully occupied. The chief cause being the want of an agricultural population of the right class.



To bring this population and provide for its wants, the system of "Clearing," so advantageously adopted in Australia, is much wanted here. It has been tried in a few cases, and succeeds admirably. But, an immigration on a large scale is requisite to bring at once these lands now lying useless, into fertile, grain growing districts. On the system of clearing, the engagement between the landowner and the settler, is generally for five or seven years. The former provides food for one season and affords all the necessary aid to start farming operations; the latter undertakes to clear, fence, ditch and drain the land committed to his care, deriving, for the period of time agreed on, all profit accruing from the cultivation of the soil, and farm produce generally.

Under such conditions, a working Farmer will find himself, at the end of his agreement, an independent man—and may purchase or pre-empt for himself.

At the present time, the average price of some of the more important agricultural implements and produce, is as follows: American ploughs, \$20 to \$25; wagons, \$200; good horses, \$150; yoke of oxen, \$120, to \$200; sheep, from \$5 to \$8; pigs, five cents per lb., live weight; hay, \$25 per ton; wheat, \$1.50 per bushel. Farm labourers are much wanted. Occasional labour, especially in the neighborhood of towns, may be obtained; but cannot be depended on.

The Public Roads are being developed and improved; it is, at present, a great drawback to the country, that the means of access to inland agricultural districts should be attended with great and almost insurmountable difficulties.

The time that has elapsed since the country first began to be settled, is certainly not great, and special exigencies have suddenly sprung up in a Colony where such labour as is required for road making, cannot readily be procured. Abundance of whin-stone and other varieties of trap rock afford excellent material, and it might be thought that here native labour would be available for preparing metal as it was in New Zealand.

To obviate the difficulty attending want of labour, an "Act to provide for the repair, improvement, and regulation of Roads in Vancouver Island, and its dependencies," has been passed, wherein it is enacted, that every male person over ten years of age, and every male and female entitled to any interest in any real estate, in any of the Road Districts shall perform six days labour upon the Public Highway, with extra days if property is extensive. This labour may be compounded at the rate of—for a man's days labour, six shillings and three pence. A cart or wagon, with a pair of horses or oxen for twelve shillings and six pence.

One important "Regulation" for the Road has been omitted, and as it concerns not only property, but life and limb, should be enforced at once, viz: that all carriages, wagons, &c., should keep the near, or left hand of the road when meeting, and the right hand side when passing any other carriage or wagon, and the same side for horsemen.

THE NATURAL PRODUCTIONS of Vancouver Island in the animal, vegetable, and mineral kingdom, will, on due development, prove a source of great wealth to the Colony. The fisheries are inexhaustible, the timber is unrivalled, and the coal is the best on the whole North Pacific Coast. Salmon in millions of

many species, abound in all the seas, lakes and streams of the Island and neighboring Continent. Great quantities are annually caught by the Indians, and a considerable export trade, capable of great expansion and development, is carried on by the Hudson's Bay Company. To give this trade its full value, so that the really excellent fish to be found in these waters may command ready sale in foreign markets, it is necessary that a careful selection should be made, many species being very coarse.

Trout, some of them from four to six lbs. in weight, are found in all the streams and lakes on both sides of the Island.

Eulachon—a very delicious fish, of the size of a large sprat or small herring, classed by naturalists among the salmon family. It visits the north coast of the Island annually in large shoals and every spring ascends the rivers of the Continent as far south as the Columbia, for the purpose of spawning. Immense quantities are taken by the Indians who manufacture from it an oil much esteemed by inland tribes, and it forms an article of trade between them. The oil is obtained by immersing the fish in a small quantity of water and applying heat, it is then skimmed off, and when properly filtered is a very fine pellucid oil of a delicate pale yellow colour. Some of the Northern natives allow the fish to become half putrid and then express the oil by pressure upon boards.

There is no doubt but that this oil will be of great economic value. It has been given medicinally and will probably be found useful where cod liver oil or other hydro-carbonaceous food is indicated.

There is every promise of most valuable deep sea fisheries. Cod, the true "Gadus," is found on the west side of the Island, and there is reason to believe that the great banks described as extending off and round the north-western extremity of the Island and Straits of Juan de Fuca, will prove to be fishing grounds rivalling those of Newfoundland. This fish averages about two feet and a-half in length, with a girth round the shoulder of eighteen inches—it is well flavored and good eating.

Halibut is found in great abundance round the whole coast. Their size is often enormous, and the quantity in which they are found may be estimated by a statement of an official of the Hudson's Bay Company, that in forty-eight hours' fishing a vessel of six hundred tons might be laden with them. At certain seasons this fish is very delicate, far excelling in tenderness and flavour its congener of the Atlantic seas.

Sturgeon is plentiful off the mouth of the Fraser River, and runs to an immense size. Isinglass made from this fish is exported by the Hudson's Bay Company.

Herrings are in countless thousands—not so full flavoured a fish as the herring of the European seas—it is less suited for salting, but makes a most excellent bloater, equal to anything exported from Europe; this will prove a very important and remunerative branch of industry.

The smelt—a very delicate fish, is captured by boat loads.

The haddock and the whiting are found, and the pilchard is said to have been seen in the Gulf of Georgia.

The dogfish is taken in incredible quantities by the natives of the various

sounds on the west coast. As much as two thousand gallons of oil have been obtained from this fish in a season by one tribe of Indians, and that a very small one in Clayoquet Sound. Considerable quantities are exported annually by the Hudson's Bay Company.

Several varieties of rock fish and of deep sea perch, are found. One species of the latter, very plentiful, often reaches 6lbs. to 8lbs. in weight. Great quantities of small fish are caught and dried by Chinamen who export them to British Columbia.

Salmon and Halibut are both put up and well preserved in hermetically sealed tins by parties in Victoria.

There are several varieties of Cetaceous animals in the surrounding ocean, but the value of whale oil even when of the right kind, is everywhere much depreciated by the discoveries of the chemist, and though this article is at present exported in small quantities, it will never prove an extensive branch of industry or of commerce.

The quantity and variety of furs are limited, the sea otter being of all, the most valuable.

Seal oil is obtained in considerable quantities and sent to England.

In the **VEGETABLE KINGDOM**, the following list of trees and shrubs will give some idea of the great variety found on the Island, although the account must be necessarily circumscribed and confined chiefly to those possessing economic value. Many have been already cursorily given in the description of the Cow-itchan and other agricultural valleys and districts on the East. On the West, along the whole coast are found "White Fir, Spruce Fir, Balsam Fir, white pine, Yellow pine, Cedar, Alder, vine leaved Maple, broad leaved Maple, Willow, Dogwood, Yew, a tree resembling the Scottish Larch, Yellow-cypress Crab-apple, Cottonwood, Hemlock oak, Aspen, Arbutus, Service tree, &c., &c.

The Douglas pine or Yellow fir, called sometimes by woodmen the "Oregon red pine," is the most important of all these trees above designated by their popular names. It grows to an enormous size, and is one of the best woods for large spars known. It can be obtained of one hundred and fifty feet in length, and has squared forty-five inches for ninety feet, makes admirable lumber, and may be procured in any quantity. This is the tree of the Colony, and is probably worth all the others put together; it is the commonest tree on the North West Coast, ranging from the Columbia river to far north of Vancouver Island. This wood is sawn into lumber, shipped to San Francisco, the Sandwich Islands, down the South American Coast, and in great quantities to Australia, and this is the wood, which, since the diminution of the supply of Riga spars, has been so prized in Europe for masts.

The French, Spanish, Sardinian and Dutch Governments have been supplied with masts and spars by a Company who have established saw mills, &c., at the head of the Alberni Canal in Barclay Sound; In the English merchant service they have been largely used, and have given great satisfaction, being universally considered the finest masts ever imported.

Appended is the translation of a report made upon the qualities of these spars in the French dockyard at Toulon. The freight from this remote quarter, makes the price somewhat high per load, as compared with the prices of



masts brought from countries nearer Europe, but notwithstanding this drawback, such is the general superiority of the wood, and the ease and economy with which the tree can be converted into a good mast, that it is really, to the ship-owner who wants a good article, very much cheaper in the end than any other. The extraordinary size, straightness, and uniform thickness of the trees, their strength and flexibility, the regularity and beauty of the grain, their durability, freedom from knots and sapwood, place them almost beyond competition in point of quality, and especially, fit them for the masting of large vessels.

In buildings, the wood is used chiefly for other than what is called "finishing purposes," for which it is too rough, hard, and strong a wood. Along the coast of North-West America "California red wood" a species of cedar is generally used, but is not equal to white pine. Doors and windows made of white pine are imported *via* San Francisco from the Eastern United States.

But *there is* a good white pine in Vancouver, very much like the Eastern pine, (called *Pinus Strobus* or Weymouth pine,) and cedar on the West coast can also be got "clear" and would no doubt do for fine work. For masts, and for heavy rafters and other important parts of the wood work of houses, there is no better wood in the world than this—the yellow Fir, the *Abies Douglassii* or douglas Pine, and if a sufficient supply of good clear cedar, and white pine for fine work can be found on Vancouver Island, then the colony can command two important sources of supply for all accessible markets.

The Balsam Fir, resembles the balsam fir of Canada, but is larger, and possibly "balsam" may be obtained from this tree, as well as from the Canadian.

The alders are remarkable for their size, some are of great height, and three feet in diameter. They make a good charcoal for working steel and for light blacksmith's work.

Two kinds of maple; the vine maple is scarce, it is hard and tough, of this, as of the yew and the crab apple, good boats knees might be made. The broad leaved maple, (*Acer Macrophyllum*) grows plentifully in Vancouver, and to a large size. The wood is esteemed by the natives of New Caledonia, as being the toughest and most suitable for the frame of the snow shoe.

The white pine of commerce has been spoken of, it exists on the West coast of Vancouver, in belts of some miles in length.

Yellow Cypress yields a fragrant wood, close grained and capable of a good polish; from the bark is manufactured, by the natives, many articles of wearing apparel, caps, hats, &c., and baskets, large and small. It is also woven into rope, which is strong and durable, used for fishing lines, short whale, and spear lines, and canoe purposes generally. From the root, plank can be obtained which is very handsomely veined, and bears a light polish, all fitted for ornamental work.

The oak found in the southern part of the Island, is small in size but admirably adapted for ships' knees, &c.

The service tree, (*Amclanchier racemosa*) a beautiful shrub, produces a berry of great utility, dried in the sun it is stored by the natives for winter use.

The Cluster Cherry (*Cerasus Cracemosa*) yields an agreeable fruit, the berry of this shrub, and of the preceding, is added to the finer kinds of pemican.

The Camass of the natives (*Scilla Esculenta*), the native onion, forms an article of diet. Hemp nettle, (*Urtica Cannabina*) grows wild around Indian lodges, and is used by the natives to make a capital twine, which is manufactured into nets, &c.

Sallal berry (*Gualthrubria Shallon*) a capital fruit for domestic use.

Many varieties of the order *vacciniae* are found, the blæberry bushes of Scotland, are represented by handsome shrubs. The cranberries are collected in large quantities and form an article of export.

In her Coalfields the Colony of Vancouver possesses almost inexhaustible wealth. Their geological history and character have been already given; it now remains to state a few commercial and working details, in reference to the portion of this valuable carboniferous deposit, which extending round the whole of the northern part of the Island, is at present only worked at Nanaimo. At this place there are three mines at work, viz. Newcastle Island, No. 3 Pit, and Parkhead Level and Slope.

The area of land belonging to the Hudson's Bay Company, who work this coal, is about 6000 acres, of which probably more than one half are coal beds. The area of coalfield explored by bores, is nine hundred thousand square yards. In these new explorations a seam 4 feet 6 inches in thickness, with a dip of 4 in 21, or nearly 2 in 5, has been found and proved—a good, clean, hard coal.

The outcrops of two other seams, apparently underlying the one proved, have been found. One measuring six feet in thickness, the other three feet six inches.

From the three mines above named there were during the twelve months ending April 30th, 1860, raised and shipped, 14,455 tons of coal, on board of 173 vessels. The total tonnage of which probably exceeded 15,000 tons. In the succeeding year, ending 30th April, 1861, there were 13,900 tons raised, and for the six months ending October 31, 1861, 8,288 tons.

The price averaged six to seven dollars, or from twenty-five to twenty-nine shillings per ton. Coal for blacksmiths purposes, three dollars per ton.

The number of miners employed in these works at present, is about forty-six; of other hands there are seventy-two, often more.

The average earnings of miners paid by task work, are twelve shillings and six pence per diem. Artisans, eight and four pence to ten shillings. Labourers six and three pence to seven and two pence, and in addition all receive medical attendance, house, and allowance of fuel gratis.

The following statement of the chemical composition of some of the coals found on the Pacific, will be illustrative and useful, showing the close relative approximation of all, while those added from the carboniferous deposits of England, will show the special differences existing. It is not merely intended to depreciate in any way the coalfields of the Pacific, which scattered around in various regions, are of the highest value, but merely to point out the true nature of the coal, and in some degree show how all will tend, each assisting

the other, to the development of commercial enterprise. The composition of a sample of Welsh coal is given for comparison.

LOCALITY, OR NAME OF COAL	Spec. Gravity of Coal.	Carbon.	Hydro- gen.	Nitro- gen.	Sul- phur.	Oxy- gen.	Ash.	Per Centage of Coke.
Welsh Coal .....	1.305	90.94	4.28	1.21	1.18	0.94	1.45	85.0
Van Dieman's Land .....		70.40	4.20	1.11	0.70	9.27	14.38	None
Sydney, N. S. W. ....		82.39	5.32	1.23	0.70	8.32	2.04	"
Formosa Island .....	1.24	78.26	5.70	0.64	0.49	10.95	3.96	"
Borneo, 11 ft. seam .....	1.21	70.33	5.41	0.67	1.17	19.19	3.23	"
Conception Bay, Chili ...	1.29	70.55	5.76	0.95	1.98	13.24	7.52	"
Vancouver .....		66.93	5.32	1.02	2.20	8.70	15.83	"

It has been well said, by Captain Richards, in the "Sailing Directions," that these coal mines have not yet been worked in a manner commensurate with their importance, for the quantity produced though considerable, is but a fraction of what may and will be produced under enterprising management. The high rate of wages, and the difficulty of getting labourers tell heavily against them, and prevent a fair competition in foreign markets. A good and most useful coal, it undoubtedly is, but not sufficiently good to compete in foreign markets, unless at a reduced price.

The Lubuan coal in the East is being extensively developed by the terms of the lease granted in 1850 to the Company working these mines. They are bound to supply coal to any of Her Majesty's ships, at £1 per ton—and should they raise in any three successive years, 15,000 tons of coal, the lease to determine and cease.

All that is wanted to develop the coal-field of Vancouver, is cheap labour. When that shall be available, then the coal will *command* all readily accessible markets—for it is undoubtedly the best on the whole Pacific Coast.

When the labour market shall be in process of time fully supplied, and wages shall have reached a lower level, then the coal will be raised at a price sufficiently low to admit of its remunerative employment in smelting and manufacturing works. At the present rates of wages and consequent price of coal, all metallic ores must be sent to England for reduction.

Gold is found disseminated through altered clay slates—spread out upon the deposits of yellow tertiary clay, and in the sands and gravel at various parts of the Island; but the quantity is too small to be remunerative. Indications of silver are reported—and prolific ores of copper are found at Cowichan, in the East, at Barclay Sound, on the West, and at Queen Charlotte's Island, in the North, a most promising Peacock or Horseflesh ore has been found. The red and black oxides, green carbonate, and silicate of the metal are all associated. Of this ore the following analysis has been returned;

The Brine Springs described as existing at Admiral Island and in Nanaimo District, may prove of value at a future day. Good clay for brick making abounds, fine grained granite boulders, freestones and limestones, for building purposes—tough whinstones for road making.

Such are the natural productions of the colony, and in its present infant

state little has as yet been done to turn them to commercial advantage. Capital and labour are both wanted. The chief industrial products at present are, salted and smoked fish, in the animal kingdom; in the vegetable, all the usual agricultural and garden produce, with spars and lumber for home use and exportation. Ship building will prove a most valuable and very remunerative branch of industry; at present good useful vessels not copper-fastened, fit for the coasting trade and for fishing purposes, can be built at the rate of fourteen pounds sterling per ton. Saw mills and grist mills are much wanted, the latter especially. The grain grown on the Island has been up to this time actually exchanged against flour from Oregon to the manifest loss of the farmer. A foundry and steam saw mill in Victoria afford the means of construction for ships of all classes, for buildings of all sizes.

In the mineral kingdom, coal, as has been fully detailed, is the only important article at present produced. Suitable buildings are being erected by a company (joint stock, limited), and the Town of Victoria will be lighted with gas.

The anomalous relative political position held by the Colonies of British Columbia and Vancouver Island, has been frequently though incidentally reverted to. Essentially one, the community of interests is so marked that it is quite impossible to treat of them separately—to consider a part and not the whole is too narrow a basis to allow of justice being done to either. Both possess great mineral wealth, and when the coal fields of Vancouver shall be fully developed by cheap labour, it is questionable which shall possess the greatest. British Columbia possesses a far greater area of agricultural land but she is deficient in sea ports, this Vancouver Island at once the shield and bulwark of her shores, supplies.

When a junction of these colonies shall have been effected, and time shall have developed the resources both of the rocky sea repelling island and the fertile inland plain, Vancouver will be the commercial mart, the "place where merchants most do congregate," her sea ports filled with shipping from every quarter of the globe, her storehouses and wharves proclaiming the advantages of Free Trade, and British Columbia participating in her prosperity, will then find a market and exit for her produce.

In Vancouver Island the naturalist and the Sportsman will find wide fields of interest and amusement in their various pursuits. The lists given in the Appendix will show in some degree the zoology, ornithology, conchology, and economic botany of the country. Necessarily very imperfect, they are intended simply to illustrate and convey some notion of its natural history. The popular as well as the scientific, or systematic names are given, the latter adopted from the 9th vol. of Pacific Railroad Reports.

The Shells are entirely from one locality, viz. Between Esquimaux Harbour and Beacon Hill, from the rocks at low water, and the dredge from a depth of about 10 fathoms, chiefly off the harbour of Victoria. As might be expected, many of the shells are of a boreal type, and shew the influence of those arctic currents spoken of as sweeping south, to below the latitude of San Francisco.

The list of birds shews Vancouver Island to be a resting place for many migratory species. Insect life is too limited to keep the feathered tribes stationary.

The sportsman will find abundant use for both rod and gun, and as a hunter he may distinguish himself in the forest, the puma, the bear and the wolf, being worthy of his prowess. Deer stalking may be enjoyed to any extent, if the term be admissible in a country so thickly wooded. Great numbers are shot annually, and the great red deer, or elk, as he is popularly called, is indeed a prize any sportsman may be proud of. Good sport might be had with a few couple of staunch slew hounds, broken from deer; and with other hounds a blank day need never happen.

Two species of grouse are found on the Island, the blue and the ruffed grouse. The latter only is stationary, the former comes in the spring to breed and is popularly known as the drum partridge, from the drumming noise made by the male bird. In the early part of May the hen bird is hatching, the nests generally having from ten to eleven eggs.

In September these birds disappear, and it is not known where they go to, as they are never seen again till the following spring, when unfortunately they fall a prey to the prowling Indian. A law in some degree protective, is in force, inflicting a penalty for dealing in game after and before a certain date, but nothing will ever stop the poaching propensities of the natives, nor is it natural that it should.

Grouse shooting begins on the 12th of August, but the sport is very different from that enjoyed on the breezy moors of Yorkshire, or of Scotland, and more resembles pheasant shooting. The cover is very thick, and the birds quick on the wing, he must fag hard, and have a ready eye and finger, who would make a bag. One or two couple of well broken active spaniels are best for the thick underwood, pointers or setters are in a measure lost, and there is no fur to distract the spaniel and draw him from feather. Down amongst the thick fern, and tangled thickets of rose and sweet briar, where along a gentle hollow ripples a tiny stream, is the place to find "Tetras." With a rush and a whirr he is on the wing, and good snap shot must be, that stops and bags the noble bird ere he shoots amongst the branches of yonder noble pine.

A good retriever is invaluable, and perhaps the best dog of all, a well-broken Irish Spaniel, an animal with strength and dash and yet obedient to command, will give most sport in this country. The birds when sprung take to tree, where they may readily be bagged by any poacher.

In the early winter snipe and wild duck afford good sport, the former has some specific difference, the eye sees at once that it is not the same, though very like the snipe of great Britain—its flight is straighter, and the bill is slightly turned up.

Excellent trout fishing may be had on every stream, and in all the arms of the sea into which fresh water runs. In the former, the yellow burn trout, and in the latter sea trout rise readily to the fly; the red and brown hackle, and a fly with a purple body and a drake's wing being very killing. Trolling with minnow and spawn, are also effectual, and are the only means by which salmon can be caught, these lordly gentlemen refusing to shew a fin to any fly, either in Vancouver or on the continent. Close to his own door, every man who loves the rod and gun, may enjoy good sport in a fine climate, nearly all the year round.

## RECAPITULATION AND GENERAL SUMMARY.

The capabilities, resources, and advantages of Vancouver Island as a Colony have been stated generally, in the foregoing pages, as they severally presented themselves to notice, under the special descriptive heads.

The Capabilities may now be concisely stated, as

1st. Geographical Position.

2d. Climate.

3d. Harbours.

The Resources, as

1st. Soil.

2d. Timber and other Vegetable productions.

3d. Coal and other Minerals.

4th. Fisheries.

5th. Trade and Commerce.

*The Advantages*—Present and Prospective.

High rate of Interest for Capital—High rate of Wages for Labour, Cheap Food and excellent Means of Education: The Rapid Growth and Development of Commercial Importance: Ready Employment and Provision for Families.

**CAPABILITIES.**—1st: The geographical position of Vancouver Island is one most favorable to the development of her resources, and quite sufficient in itself, with the other natural advantages she possesses, to have ensured success under favorable circumstances to Colonial enterprise, irrespective of any collateral advantages, derivable from proximity to gold producing countries—that Vancouver Island failed to do so when tried, is no objection to the proposition; the circumstances under which the trial was made were not favourable. It is not intended to assert that Vancouver could ever have made a great Colony; but she would have made a prosperous one, and could have well maintained a population on her own natural resources.

Her geographical position gives her commercially and in a military point of view, strategically the command of the North Pacific. Her bold and rugged shores have few hidden dangers, and the seaman knowing that he has safe and sure guides, can in the darkest night as in the open day run for his port.

Carrying on a trade with Australia she has thus already established relations with three gold producing countries. Her importance will soon be felt on the distant shores of Russian Asia, of Japan, and in the China Seas, from whence an important immigration has already set in; and when the wealth of the Pacific Islands comes to be developed, Victoria will be the emporium of their trade for the supply of North West America. An outpost of the Mother Country, dockyards will receive and refit the ships that protect her commerce and the honour of her flag, to the golden regions and fertile plains of British Columbia, Vancouver Island will be "As the strong man armed that keepeth the door."

**THE CLIMATE** is most suitable for the Anglo-Saxon constitution, in fact for all races and temperaments, neither too relaxing in the Summer heat, nor de-

pressingly severe in the Winter cold. Free from all endemic, and, with slight exceptions from all epidemic diseases, residents enjoy good health, and suffer only, or in great part, from causes already given.

THE HARBOURS form the chief of all the capabilities of the Island—without them, geographical position would avail her nothing; but having these, she is enabled to make for herself a position, and with the concomitant advantages of Free Trade, take independent rank as a Colony. But these great natural advantages, belong of right, as much to the Continent, the shores of which Vancouver guards, and no such distinctive right as now obtains can long hold good. The harbours of Vancouver are the sea-ports of British Columbia—and as such, when a union of the Colonies shall have taken place, their great importance, not only to the North-Western portion, but to the whole of British North America will be known.

Such are a few of the capabilities of Vancouver as a Colony, and they may be safely described as unrivalled in the North Pacific.

RESOURCES.—In her soils, Vancouver, as has been fully shown, possesses all the qualifications necessary for raising food for man and beast—and these soils are by no means so limited in extent, or inferior in quality, as to preclude the probability of the Island being a grain producing country. It is simply that her commercial capabilities are greater, owing to her remarkable natural advantages—her position between two gold producing regions, and close to a grain-bearing country, where, for some years, the facilities for obtaining and working land have been greater—it is simply for these reasons that agriculture has taken a secondary place in this Colony—when the land shall be occupied by a class of Farmers—working men—who will put their own hands to the ploughs; then will the full value of the soil be known, and for home consumption, the Colonists need seek no foreign aid.

The timber of Vancouver is nowhere surpassed, and the supply is inexhaustible, except in so far as obstacles may exist for its transport to the sea. The report on its qualities, by the French authorities in the Imperial Dock-yard at Toulon, of which a translation is given, is very interesting and instructive—showing clearly the great value of this splendid pine, of which a large export trade is in the shape of masts and spars of the largest size, and in lumber.

COAL.—This is an invaluable resource and means of wealth, and each succeeding year will increase its importance—when the wood around the settlements shall be no longer ready at hand, or easy of access, the demand for coal will increase both here and at San Francisco, and more labour will be required—when labour shall be at lower rates, then the coal may be raised at sufficiently low prices to pay in smelting works and general manufactories.

THE FISHERIES are very promising, and will be an important element in the prosperity of the Colony. They form an exceptional case as regards Indian labour—for in such an occupation as this, the native will work freely, and better than a white man. Salmon, cod, halibut, sturgeon, herring, eulachon, &c., may all be caught in great quantities and prepared for export.

TRADE AND COMMERCE are the grand resources of the colony, geographical position, natural advantages, and Free Trade Institutions, destine her to be the

commercial mart of the Pacific. Commerce when free will always find expansion.

THE ADVANTAGES derivable from the capabilities and resources detailed above and which might lead an intending emigrant to adopt Vancouver as his home, are PRESENT and PROSPECTIVE. The present advantages are—to the capitalist, a high rate of interest for his money—to the agriculturist, a rich and virgin soil, after clearing requiring little labour of working for many years, giving an abundant return for seed sown. For him, Free Trade provides cheap tools and agricultural implements, and at the same time will develop and form a home market for his produce. But the agriculturist who would succeed must be his own servant, must put his own hand to everything. A paying branch of industry will be found in the establishment of flour mills, wherewith to grind the wheat on the spot.

LABOUR commands a high price, the wages earned by artisans and skilled mechanics of all kinds, as well as by day labourers, with whom a dollar represents a shilling in Great Britain, is proof of this, and withal food is cheaper.

Domestic servants are so scarce that the rates of wages given are no rule to go by. Nothing better exists in the colony however than such labour, and an immigration of respectable young and middle aged women as domestic servants and nurses, is very much needed.

The prospective advantages are those accruing, 1st—From an early settlement in a young and growing colony situated as a commercial emporium between great wealth producing countries. 2d—The certainty of obtaining independence and ultimately a competence in a short time by steady industry.

3d—The many opportunities afforded by the development of the colony in its home and foreign relations, to provide for and settle in life the youthful members of families. 4th—The excellent systems of schools and of education in this colony, which under various managements meet the wants of all. Such, then, thus briefly and slightly sketched, are some of the capabilities, resources and advantages of Vancouver Island as a settlement.

Within the limits of an Essay it is impossible to do justice to them all, but they are sufficiently obvious, and their force sufficiently self-evident to invite attention from the capitalist, the merchant, the working farmer, the miner, the artisan and skilled mechanic, and from every man who takes a pride in honest labour.





# APPENDIX.

ABSTRACT of Meteorological Observations, taken on board Her Majesty's Ship *Topaze* at Esquimalt, Vancouver's Island.

QUARTER ENDING 30TH JUNE, 1860,

DATE.	High-est.	Low-est.	Aver- age.	Range	WEATHER.									
					No. of Days.	No. of Days.	No. of Days.	No. of Days.	No. of Days.	No. of Days.	No. of Days.	No. of Days.	No. of Days.	No. of Days.
					Fine.	Wind.	Foggy.	Wind.	Rain.	Wind.	Over- cast.	Wind.	Snow.	Wind.
APRIL.														
Barometer,.....	30.53	29.25	30.04	.128	17	Var.			7	Var.	6	E&S		
Thermometer,...	61½°	44°	51½°											
Diff'nce between wet & dry bulb, May.	7°	1½°	3½°	5°										
Barometer,.....	30.49	29.63	30.04	.86	18	Var.			9	SW	4	SW		
Thermometer,...	62½°	46½°	55¼°	16°										
Diff'nce between wet & dry bulb, June.	9°	2°	4 1-10°	75 1-10										
Barometer,.....	30.47	29.76	30.02	.71	20	S E & S W			6	S W	4	S		
Thermometer,...	67°	52½°	61°	14½°										
Diff'nce between wet & dry bulb,	7°	1°	4 7-10°											
Total,.....					55				22		14			

QUARTER ENDING 30TH SEPTEMBER, 1860.

July.					18	S W	6	c'lm	7	S & S E				
Barometer,.....	30.29	29.57	29.93	.72										
Thermometer,...	67°	54°	60½°	13°										
Diff'nce between wet & dry bulb, August.	8½°	1°	3½°	7½°										
Barometer,.....	30.37	29.64	30.01	.73	24	S W & c'lm			7	S & S E				
Thermometer,...	72°	55°	63½°	17°										
Diff'nce between wet & dry bulb, September	6°	0°	1°	1½°										
Barometer,.....	30.47	29.76	30.12	.71	18	c'lm & var.			7	SSE & S	5	S & SSE		
Thermometer,...	64½°	50°	57½°	14½°										
Diff'nce between wet & dry bulb,	2½°	0	1	1½°										
Total,.....					60		6		21		5			

QUARTER ENDING 31ST DECEMBER.

October.					13	Var.			11	NE & Var.	7	c'lm		
Barometer,.....	30.25	29.63	30.01	.62										
Thermometer,...	60½°	45°	52°	15°										
Diff'nce between wet & dry bulb, November.	3°	0°	103	3°										
Barometer,.....	30.83	29.20	30.18	1.57	10	Var.			12	N & SW	8	ESE		
Thermometer,...	61°	40 1-10	49 1-6	20½°										
Diff'nce between wet & dry bulb, December.	5°	0°	1 1-30	5°										
Barometer,.....	30.54	29.43	29.96	.111	15	N & NE			9	c'ms	7	Var.		
Thermometer,...	59°	28½°	42°	30½°										
Diff'nce between wet & dry bulb,	7°		1 5-6	7°										
Total,.....					38				32		22			

## Meteorological Observations, continued—

## QUARTER ENDING 31ST MARCH.

January.					10	Var. & c'ms	11	Var.	10	Var.
Barometer,.....	30.37	29.65	30.01	.72						
Thermometer,...	51½°	23½	38	28						
Diff'nce between wet & dry bulb, February.	6	½	3	5½						
Barometer,.....	30.67	29.19	29.94	.50	9	c'ms & Var.	7	Var.	Var.	1
Thermometer,...	59½°	29½	44½	30						
Diff'nce between wet & dry bulb, March.	5	1	3	4						
Barometer,.....	30.60	29.44	25.02	1.16	14	Var.	4	Var.	10	Var.
Thermometer,...	58°	34	46	24						
Diff'nce between wet & dry bulb,	5½	½	2½	5						
Total,.....	33						22		31	
Grand Total,.....	186						97		78	

Meteorological Observations; taken at Victoria, Vancouver Island, during the years 1859, 1860, and 1861, deduced from Observations taken daily at 9 a. m., 3 p. m., and 9 p. m.

Year.	Month.	No. of Days.	Ther. Mean.	Bar. Mean.	Ex-treme Heat.	Ex-treme Cold.	Year.	Month.	No. of Days.	Ther. Mean.	Bar. Mean.	Ex-treme Heat.	Ex-treme Cold.
1859	October.	18	49.26	29.83	55.00	42.00	1860	Sept.	30	57.99	29.97	70.00	50.00
	Novem'r	30	40.48	29.60	48.00	23.00		October	31	53.08	30.01	61.00	44.05
	Decem'r	30	36.29	30.05	48.00	17.00		Novem.	30	45.34	29.91	55.00	33.05
1860	January	31	39.81	29.53	47.00	32.00		Decem.	31	41.22	29.66	57.06	33.05
	February	29	41.61	29.78	47.00	32.00	1861	Jan.	31	38.48	29.89	50.05	27.00
	March	31	45.33	29.83	66.00	34.00		Feb.	28	41.76	29.76	49.05	33.00
	April	30	47.46	29.85	66.00	35.00		March	31	44.27	29.82	56.00	33.05
	May	31	51.79	29.85	63.00	40.00		April	29	47.13	29.82	57.05	40.00
	June	30	58.17	29.85	81.00	49.00		May	31	52.15	29.90	65.05	42.07
	July	31	59.33	29.99	72.00	0.00		June	30	58.09	29.92	71.00	48.00
	August	31	63.65	29.98	76.00	54.00		July	29	60.97	29.86	75.00	52.25
								August	20	59.61	29.80	36.05	56.00

Abstract of Thermometrical Observations, from a Register kept at Fort Victoria, Vancouver Island, for 1850, showing Maximum and Minimum Temperatures, &c., &c.

Date,	THERMOMETER.						WEATHER.						
	Highest.			Lowest.			No. of Days.		No. of Days.		No. of Days.		Snow
	A. M.	P. M.	P. M.	A. M.	P. M.	P. M.	Cear & Fine	Wind	Overcast Cloudy.	Wind	Rain	Wind	
1850.	8	2	8	8	2	8							
January....	43°	47	40	22	31	21	8	N & N by E			16	sw and W	7
February....	44	58	47	26	36	29	10	N and NE	6	N E	11	SW SE	
March.....	49	60	51	27	33	28	6	N and W	8	SW SE	8	SE	9
April.....	54	69	49	39	39	35	24	NW to SW	2	SE	4	SE	N and SE
May.....	65	79	57	45	46	39	15	NW to NE	12	S to SW		SE	
June.....	65	84	64	50	59	47	23	Light & Variable	7	NE SE			
July.....	65	82	73	52	60	53	22	NW SW	9	S SW			
August.....	64	79	60	53	63	53	26	NW NE	5	Calm			
September...	62	74	63	45	59	49	24	SSW NW	6	Calm			
October.....	55	70	52	33	48	38	20	N, NE, SW	10	C'ms, l'ts & SE W's			
November...	52	53	51	32	38	32	13	C'ms, l't E winds	14	SW SW	3	SE	
December...	43	46	44	14½	24	16	10	C'ms, l't N winds	16	Calm	4	SW	1
Total....							201		96		50		17



In the four winter months, from January to March, and October to December, 41,220 inches of rain fell in 1861, and 40,696 inches in 1860. In the remaining months 19,255 inches fell in 1861, and 13,834 in 1860. Of the entire quantity of rain 26 inches fell in January, November, and December, in each year.

The prevailing direction of the wind during rain in both years was E. and SE.

June was the driest month, and August the warmest in 1860. July was both warmest and driest in 1861.

The Fraser River attained its highest level at New Westminster, for the year 1861, on the 8th June, and its lowest, being a difference of 9 feet 6 inches, on the 17th March; between the 10th of May and 10th of August, ships did not swing to the flood tide. These periods, and the difference of level, correspond very closely with the Observations for 1859 and 1860.

There was floating ice in the Fraser River opposite New Westminster, 7th January, 1861; it increased until 22nd January, and disappeared on the 2nd February. The navigation to the mouth of the River was not impeded. There was no ice in the Fraser, at New Westminster, in 1860.

The Observations were taken by 2nd Corporal P. J. Leach, and Lance Corporal J. Conroy, R. E.

R. M. PARSONS, Captain, R. E.

ANALYSIS of the Calendar or "List of Persons" Tried before the Courts of General Gaol Delivery, held at Victoria, Vancouver Island, between 1st January, 1859, and 30th June, 1861.										
Crimes.	No. of Cases.	Verdicts.		Sentences.	Remarks.					
		Guilty.	Not guilty.							
Murder.	6	2	4	Death recorded in 1 case.	Both natives.					
Forgery.	1	.....	.....	Trial postponed.	Imprisonment.					
Riot.	3	.....	3	Recommended to mercy.	No prosecution					
Shooting with intent to Murder.	2	1	1	2 years' imprisonment, hard labour.	"					
Obtaining goods on false pretences.	2	.....	.....	.....						
Accessory before fact, manslaughter	1	.....	.....	.....						
Slabbing with intent to kill.	2	1	1	1 year's imprisonment, hard labour.						
Assault.	3	2	1	Imprisonment, hard labour.						
Manlaughter.	2	1	.....	No prosecution.	} Both natives					
Intent to commit felony.	1	.....	.....	No prosecution.	} No bill.					
Receiving stolen goods.	4	1	2	12 months' imprisonment, hard labour.	1 case, no bill.					
Carcey.	5	3	2	12 " "						
Perjury.	5	.....	.....	.....	No bill.					
Perjury.	5	.....	.....	.....	No prosecution					
Stealing from wreck.	3	1	2	12 months' imprisonment, hard labour.						
Arson.	1	1	.....	3 years' " "						
Burglary.	1	1	.....	9 months' " "						
General Total.	47	14	16		11 cases not trial.					

**A List of Charges and Summary Convictions before the Police Magistrate, at Victoria, Vancouver Island, from January 1st, 1860, to 30th June, 1861.**

OFFENCES.	1859.			1860.			1861.			Total.
	Convictions.	Discharged.	Total.	Convictions.	Discharged.	Total.	Convictions.	Discharged.	Total.	
Misdemeanours .....	510	182	692	289	76	365	102	25	127	1184
Common Assault .....	70	34	194	106	24	131	38	10	48	273
Assault with Intent .....	10	...	10	12	3	15	6	...	6	31
Larceny .....	49	39	88	47	50	97	36	20	56	241
Felony .....	15	6	21	20	8	28	7	4	11	69
sellingspirits to Indians	20	14	64	50	11	61	12	1	13	138
recovery of Wages .....	...	5	33	33	5	38	5	1	6	77
Desertion .....	...	3	24	...	6	18	...	...	27	69
Lodgings .....	...	11	12	...	11	11	...	...	5	28
<b>Total .....</b>	<b>674</b>	<b>294</b>	<b>1048</b>	<b>557</b>	<b>194</b>	<b>754</b>	<b>206</b>	<b>61</b>	<b>299</b>	<b>2101</b>

**SCHOOL REPORT** Drawn up by the Rev. E. Cridge, Acting Superintendent of Education. August 27th, 1861.

SIR,—I have the honor to submit, for the information of His Excellency the Governor, the accompanying Report on the state of the Colonial Schools:

1st. Victoria School, Mr. W. H. Burr, master. The sixth annual examination of this School took place on the 16th of July, ultimo, at which fifty-three pupils were present, and fifteen boys received prizes, donations by His Excellency the Governor.

The subjects of examination will be found in Schedule No. 2.

Very satisfactory progress was manifested in some of the advanced subjects, particularly in Book-keeping, and the school at large was being well founded in the elementary subjects, especially in reading and orthography.

I consider the school in a generally satisfactory condition, and, seeing that there is but one teacher to fifty pupils, doing its work well. The chief defect observable is some want of uniformity and punctuality in attendance, the remedy for which perhaps rests more with the parents than with the teacher.

The School room is also too small for the number of pupils frequently in attendance. The house, which consists of eight rooms, as well as the premises generally, is in fair repair.

Of the ten acres of which the School Reserve consists, a portion of six acres is enclosed, and four acres under cultivation by the teacher.

As some inconvenience has been alleged with regard to the distance of this School from the town, I would observe that it is situated at a distance of 300 paces beyond the boundary of the town, and there is a good footpath to within that distance of the School, constructed last year for the benefit of the scholars, by the Commissioner of Police, A. F. Pemberton, Esq., by private subscription and by the labour of prisoners.

The remainder of the road is in the winter rough and inconvenient, but at a very little expense a good pathway could be extended the whole distance. It would be for the benefit of education that this should be done before the winter, either by the Government or by subscription.

The almost nominal rate (£5, or 20s. per annum), at which instruction at a really useful school is given, might be an inducement to parents and others to contribute to its improvement in this and other respects.

2nd. Craigflower School, Mr. H. Claypole, teacher. The sixth annual examination of this School was held on the 11th July, ult., at which twenty-one pupils were present. Prizes, the gift of His Excellency, were awarded to three boys and two girls.

Great pains have evidently been taken with the scholars during the past year. They are well grounded in the elementary subjects, and some of the elder pupils displayed considerable aptitude in Geography, Grammar and Arithmetic.

This School is well situated for the population growing in the neighbourhood, and is, I feel sure, conferring important advantages on the community. The School House, which contains six rooms, and the premises generally, need considerable repairs. The School Reserve consists of five acres; no portion is at present under cultivation.

3rd. Nanaimo School, Mr. C. Bryant, master. Of the children in this School are eighteen not exceeding seven years of age. I have not had an opportunity of visiting it recently, but from frequent communications with the teacher and information derived from other sources, I have reason to believe that Mr. Bryant continues to display the same assiduity in the discharge of his duties as heretofore.

From the teacher's Report it appears that the School house, which consists of four rooms need some repairs.

The following Schedules will afford more detailed information on the points to which they refer: The period to which these returns relate is the year ending July, 1861.

**ATTENDANCE—Number now on the books:**

	Male.	Female.	Above 10.	Under 10.
VICTORIA SCHOOL.....	53	3	35	21
CRAIGFLOWER.....	15	8	11	12
NANAIMO.....	22	10	5	27
Total.....	90	21	51	60

**Admitted during the year—**

VICTORIA SCHOOL.....	24
CRAIGFLOWER.....	5
NANAIMO.....	24

Total ..... 53

**Removed during the year—**

VICTORIA.....	22
CRAIGFLOWER.....	5
NANAIMO.....	9

Total ..... 36

**Average Attendance—**

VICTORIA SCHOOL.....	42
CRAIGFLOWER.....	16
NANAIMO.....	24

Total ..... 82

**SUBJECTS—Number of Pupils in each:**

VICTORIA.	Reading.	Writing.	Grammar, Geo- graphy, History	Geometry.	Latin.	Book Keep- ing.	Draw- ing.	Scriptures
	30	15	0	0	4	20	38	
CRAIGFLOWER.....	10	10	2	1	0	0	above 20	
NANAIMO.....	9	3	0	0	0	0	20	
Total, 49 .....	28	2	1	4	20	78		

**3d. Emoluments received by the Teachers during the past year:**

	SALARIES	Fees from Pupils	Voluntary contributions.
Victoria.....	\$150 0 0	\$35 10 0	\$9 3 0
Craigflower	150 0 0	12 12 0	0 0 0
Nanaimo...	150 0 0	25 7 6	0 0 0
Total... ..	\$450 0 0	\$73 9 6	\$9 3 0

Although it is beyond the Province of this Report to enter into the wide question of an Educational system, I venture to submit one or two remarks on the present state of the Colonial Schools. While it is plain that they are conferring a great benefit on a large proportion of the community, that they are doing so at a small charge on the Public Revenue; and that the absence of any one of these schools would be severely felt, it is also plain that they are at present in an imperfect and elementary state. This arises partly from the growth of the pupils and the short time during which, in many cases, they remain at school; but chiefly from the insufficient supply of teaching power.

It cannot be expected that while from 25 to 50 scholars are under the care of a single teacher without assistants or monitors, the schools should be in so efficient a state as might be desired.

It is therefore gratifying under these circumstances to be able to report that they are working in a really useful manner.

(Signed)

EDWARD CRIDGE,  
Acting Superintendent of Education.

**COLLEGIATE SCHOOL FOR BOYS—Victoria, Vancouver Island. Visitor—The Lord Bishop of British Columbia.**

This School is conducted upon the plan of the Grammar Schools of England, and designed to qualify for the learned professions, commercial and mercantile pursuits, and for the universities.

In addition to sound religious instruction, the course of education comprises a thorough sound English education, Arithmetic, Penmanship, Mathematics and Book Keeping.

MODERN LANGUAGES—French, German and Spanish, Hebrew, Greek and Latin.

ELEMENTS OF NATURAL PHILOSOPHY—Drawing, including Landscape, Figure and Line Drawing, with the principles of architecture and design.

Boys will be admitted from the age of 7 and upwards.

TERMS:		
From 7 to 12 years.....	\$5 0 0 or £1 0 0	} Per month.
" 12 to 16 ".....	6 0 0 or 1 5 0	
" 16 and upwards.....	8 0 0 or 1 13 0	

Payable in advance. A reduction to families sending more boys than one. Two vacations in the year.

**LADIES' COLLEGE, Victoria, Vancouver Island. Visitor—The Lord Bishop of British Columbia and Vancouver Island.**

The course of Education comprises Religious and Moral training, English in all its branches, Modern Languages, Music, Singing, Drawing, Painting, &c., &c., &c.

## TERMS :

Under 10 years of age.....	\$5 0	or £1 0 0	} Per month
From 10 to 16 ".....	6 0	or 1 5 0	
Above 16 ".....	10 0	or 2 0 0	
The only extras are—1. Modern Languages; 2. Music and Singing; 3. Drawing and Painting			
\$2, or 8s. per month each.			

**AMOUNT of Gold Dust and Gold Bars shipped by Messrs. Wells, Fargo & Co.,  
Victoria, V. I., from August 14th, 1858, to December 8th, 1861.**

	DATES.	U. S. Currency	Pounds Stg.
1858.	From August 14th, to August 27th	\$8,803 06	£1,760 12 00
	" Septembr 2nd, to Septembr 25th	27,871 40	5,574 4 00
	" October 8th, to October 24th	9,7075 92	19,415 4 00
	" Novembr 8th to Novembr 22nd	95,248 09	19,049 12 00
	" Decembr 4th to Decembr 27th	108,766 70	21,753 7 00
1859.	From January 6th to January 22nd	33,041 90	6,608 8 00
	" February 10th to February 28th	85,664 48	17,132 18 00
	" March 10th to March 28th	44,246 06	8,849 4 00
	" April 11th to April 27th	58,959 23	11,791 17 00
	" May 8th to May 26th	112,802 88	22,560 11 00
	" June 6th to June 25th	79,451 28	15,890 5 00
	" July 9th to July 26th	55,819 03	11,163 16 00
	" August 7th to August 28th	75,713 83	15,142 15 00
	" Septembr 7th to Septembr 24th	51,320 72	10,264 3 00
	" October 6th to October 27th	53,021 00	10,604 25 00
	" Novembr 10th to Novembr 11th	44,796 00	8,059 4 00
	" Decembr 5th to Decembr 24th	128,652 00	25,730 8 00
1860.	From January 6th to January 30th	76,600 00	17,320 00 00
	" February 8th to February 29th	54,995 00	10,999 00 00
	" March 14th to March 30th	49,811 00	9,962 4 00
	" April 8th to April 30th	89,780 00	17,956 00 00
	" May 11th to May 30th	109,956 00	21,991 4 00
	" June 9th to June 29th	124,619 00	24,923 16 00
	" July 9th to July 25th	107,260 00	21,452 00 00
	" August 1st to August 26th	135,126 00	27,025 4 00
	" Septembr 4th to Septembr 18th	84,403 00	16,880 12 00
	" October 9th to October 27th	166,448 00	33,289 12 00
	" Novembr 11th to Novembr 19th	121,369 00	24,273 16 00
	" Decembr 3rd to Decembr 23rd	178,099 00	37,619 16 00
1861.	From January 4th to January 28th	73,561 00	14,703 4 00
	" February 9th to February 24th	43,527 00	8,705 8 00
	" March 1st to March 27th	72,041 00	16,408 4 00
	" April 4th to April 25th	77,027 00	15,405 8 00
	" May 2nd to May 24th	97,067 00	19,413 8 00
	" June 3rd to June 25th	144,088 00	28,817 12 00
	" July 15th	74,706 00	16,541 4 00
	" August 9th to August 27	168,226 72	33,645 7 00
	" Septembr 17th	71,181 00	14,236 4 00
	" October 8th to October 26th	154,916 00	30,973 4 00
	" Novembr 17th	205,998 00	41,199 12 00
	" Decembr 8th	108,053 00	21,610 12 00
Total.		\$3,750,111 30	£750,022 4 3

## VANCOUVER ISLAND.

## PROCLAMATION.

By His Excellency, James Douglas, C. B., &c. &c.

Whereas, I have been empowered by Her Majesty's Government to fix the upset price of Country Land within the Colony of Vancouver Island and its Dependencies, at 4s. 2d. per acre



And whereas, I have been authorized as aforesaid to take such steps as may tend to promote the settlement of Country Land in the said Colony.

And whereas, it is expedient to make public the method by which bona fide settlers may acquire the same land;

Be it therefore known unto all men:

That Country Land to be Sold at 4s. 2d. per Acre.

I. That the upset price of all Country Land in Vancouver Island shall be from henceforth 4s. 2d. per acre.

British Subjects may enter upon and occupy Land, not being otherwise reserved, in certain quantities and in certain districts.

II. That from and after the date hereof, male British Subjects, and Aliens who shall take the oath of allegiance before the Chief Justice of Vancouver Island, above the age of eighteen years, may pre-empt unsold Crown Lands in the Districts of Victoria, Esquimalt, Metchoen, the Highlands, Sooke, North and South Saanich, Salt Spring Island, Sallias Island and Chemainus, (not being an Indian Reserve or Settlement,) of the area, and under the conditions following:

A Single Man, 150 acres.

A Married Man, whose wife is resident in the Colony, 200 acres.

For each of his children under the age of eighteen years, resident in the said Colony, an additional 10 acres.

Pre-emptor, before recording his Claim, to take the Oath of Allegiance if a British Subject who has become Subject to some other Nation.

III. All British subjects, who shall be desirous of Pre-empting, and who may, at the time of record, have taken the oath of allegiance to, or become the subject or citizen of any Foreign Sovereign, State or Nation, shall, as a condition precedent to recording their claims, take the Oath of Allegiance in manner aforesaid.

Pre-emptor to Record his Claim immediately on Occupation. Fee.

IV. Immediately after occupation, the Pre-emptor shall record his claim at the Office of the Surveyor General at Victoria; paying for such record the sum of eight shillings and four pence.

Regulating the Form of Claims.

V. The land selected, if unsurveyed, shall be of a rectangular form, and the shortest side of said rectangle shall be two-fifths the length of the longest side; and the boundaries of such land shall also run as nearly as possible by the cardinal points of the compass.

VI. Where the land sought to be acquired is unsurveyed, and in whole or part bounded by rocks, mountains, lakes, swamps, the margin of a river, or the sea coast, or other natural boundaries, then such natural boundaries may be adopted as the boundaries of the land selected.

VII. The claimant shall, if the land is unsurveyed, give the best possible description thereof in writing to the Surveyor General, at the time of record, with a map thereof, and shall identify the land, by placing a post at each corner, and by stating in his description any other landmarks which may be of a noticeable character.

Mode of Recording Claims in Surveyed Lands.

VIII. If the land, however, be surveyed, the claimant shall give the description aforesaid by identification with the landmarks laid down by the Government Survey.

Payment.

IX. The claimant shall, if the land be unsurveyed, pay into the Land Office at Victoria, the sum of four shillings and two pence per acre for the same as soon as the land is included within the Government Survey; if the land be surveyed, he shall pay into the said Land Office the sum of four shillings and two pence per acre by three instalments, viz: One shilling and one penny per acre within one year from the day of record; one shilling and one penny per acre within two years from the said day of record, and two shillings within three years from the said day; and any default in any of the payments aforesaid, shall cause a forfeiture of the pre-emption claim, and of the instalments (if any) paid up.

Certificate of Improvement to be granted after two years occupation and 10s. per acre improvement.

X. When the pre-emptor, his heirs or devisees, shall prove to the Surveyor General by the satisfactory evidence of third parties, that he has, or they have, continued in permanent occupation of the claim for two years from the date of record, and has or have made permanent improvements thereon, to the value of ten shillings per acre, the said Surveyor General shall issue to him or them, a certificate of improvement, in the form marked A, in the Schedule hereto.

Holder of Certificate of Improvement may Sell, Lease or Mortgage.

XI. Upon the grant of the Certificate of Improvement aforesaid, the person to whom the same is issued may, subject to any unpaid instalments, sell, mortgage, or lease the land, in respect of which such certificate has been issued; but until the entirety of the purchase money of the said land has been paid, no sale, mortgage, or lease of the said land shall be valid, unless a Certificate of Improvement as aforesaid, has been issued in respect thereof.

Conveyance of Surveyed Lands.

XII. Upon payment of the entirety of the purchase money, a conveyance of the land shall be executed in favor of the Pre-emptor, reserving to the Crown the right to take back so much thereof as may be required for roads or other public purposes, and reserving also the precious minerals, with a right to enter and work the same in favor of the Crown, its Assigns and Licensees.

Conveyance of Pre-empted Claim in Unsurveyed Lands.

XIII. If the land is not then included in the Government Survey, the conveyance shall, with the reservations aforesaid, be executed as soon as possible after the same is so included; and the Pre-emptor shall, upon survey, be entitled to take any quantity of unpre-empted land, at the price of four shillings and two pence per acre, which may be laid off into the Sections in which his pre-empted land is situate, or if unwilling so to do, he shall forfeit so much of the pre-empted land as lies in those Sections which he is unwilling to purchase.

**Priorities.**

XIV. Priority of title shall be obtained by the person who, being in actual occupation, shall first record his claim in manner aforesaid.  
 Forfeiture by Cessation of Occupation.

XV. Whenever any person shall cease to occupy land pre-empted as aforesaid, for the space of two months, the Surveyor General may, in a summary way, on being satisfied of such permanent cessation, cancel the claim of the person so ceasing to occupy the same, and record *de novo* the claim of any other person satisfying the requisitions aforesaid, and in the event of any person feeling aggrieved thereat, his remedy shall be personally against the person so recording.

Compensation for Waste or Injury.

XVI. In the event of the Crown, its Assigns or Licensees, availing itself or themselves, of the reservation to enter and work the precious minerals as aforesaid, a reasonable compensation for the waste and damage done shall be paid by the person entering and working to the person whose land shall be wasted or damaged as aforesaid; and in case of any dispute, a jury of six men, to be summoned by the Surveyor General, shall settle the same.

XVII. Nothing in the conditions hereintore contained, or in any title to be derived hereunder, shall be construed as giving a right to any claimant to exclude Licensees of the Crown from searching for any of the precious minerals in any unenclosed land on the conditions aforesaid.

Saving of Water Privileges for Mining Purposes.

XVIII. Water privileges, and the right of carrying water for mining purposes, may, notwithstanding any claim recorded, certificate of improvement, or conveyance aforesaid, be claimed and taken upon, under, or over the land, so pre-empted by miners requiring the same, and obtaining a grant or licence from the Surveyor General in that behalf, and paying a compensation for waste or damage to the person whose land may be wasted or damaged by such water privilege or carrying of water, to be ascertained in case of dispute by a jury of six men in manner aforesaid.

XIX. In case any dispute shall arise between persons with regard to any land acquired as aforesaid, any one of the parties in difference may (before ejectment or action of trespass brought) refer the question in difference to the Surveyor General, who is hereby authorised to proceed in a summary way to restore the possession of any land in dispute to the person whom he may deem entitled to the same; and to abate all intrusions and award and levy such costs and damages as he may think fit, and for all or any of the purposes aforesaid to call in to his assistance the civil authorities or any process of law.

Given under my hand, &c.

JAMES DOUGLAS.

VANCOUVER ISLAND.

PROCLAMATION.

By His Excellency, James Douglas, C. B., &c.,

Whereas, I have been empowered by Her Majesty's Government to take such steps as may tend to promote the Settlement of Country Land in the said Colony:

And whereas, it is expedient to extend the provisions of a Proclamation, given under my hand and the public seal of this Colony, and dated the 19th day of February, 1861, to the whole of Vancouver Island and its Dependencies;

Now, therefore, be it known unto all men, that

The provisions of the said Proclamation, given under my hand and the public seal of this Colony and dated the 19th day of February, 1861, shall, from and after the date hereof, extend to and include the entirety of Vancouver Island and its Dependencies.

Given under my hand and the Public Seal, &c.

JAMES DOUGLAS.

VANCOUVER ISLAND.

PROCLAMATION.

By His Excellency James Douglas, C. B., &c.

Whereas, I have been empowered by Her Majesty's Government, to take such steps as may tend to promote the settlement of Country Land in the said Colony.

And Whereas, it is expedient to extend the time during which a person may cease to occupy land pre-empted under the provisions of a Proclamation given under my hand and the Public Seal of this Colony and dated the 19th day of February, 1861.

Now therefore, be it known unto all men that any person having pre-empted land under the provisions of the said Proclamation may if he shall have been continuously in occupation of the same for the space of (8) eight calendar months next previously to his leaving, leave the same for any period not exceeding (6) six calendar months, provided that within (21) twenty-one days from the date of his leaving the same he shall fill in a memorandum in the book kept for that purpose in the Land Office at Victoria, with the particulars and in the manner therein contained.

Given under my hand and the Public Seal, &c.

JAMES DOUGLAS.

**Victoria and Esquimalt Harbour Dues Act, 1860.**

**SCHEDULE A.**

**Fees for Entrance and Clearance of Vessels entering and clearing the Ports of Victoria and Esquimalt.**

	£	s.	d.		£	s.	d.
All Vessels under 15 Tons	00	4	2	All Vessels under 400 Tons	1	13	4
" Between 15 & 30 tons.	00	6	3	" Between 500 & 600 tns.	2	5	10
" " 30 & 50 "	00	8	4	" " 600 & 700 "	2	10	00
" " 50 & 100 "	00	12	6	" " 700 & 800 "	2	14	2
" " 100 & 200 "	00	18	9	" " 800 & 900 "	2	18	1
" " 200 & 300 "	1	5	00	" " 900 & 1000 "	3	2	6
" " 300 & 400 "	1	13	4	" " 1000 & upwards.	3	6	8
" " 400 & 500 "	2	1	8				

All Steamers, *bona fide*, carrying mails to pay half the amount of the above scale of Fees, according to their tonnage.

**SCHEDULE B.**

**Half-yearly License for Coasters.**

Under 10 tons	-	-	-	-	-	£1	0	0
Above 10 and under 30	-	-	-	-	-	2	0	0
" 30 and under 50	-	-	-	-	-	3	0	0
" 50	-	-	-	-	-	4	0	0

**SCHEDULE C.**

Wherries and Skiffs plying for hire and licensed to carry not exceeding six passengers. Per quarter - - - - - £1 0 0

Row Boats and Yawls plying for hire and licensed to carry more than six passengers, and under 10 tons burthen. Per quarter - £1 10 0

Lighters and Scows employed in freighting or discharging vessels, or otherwise for hire, under 10 tons burthen. Per quarter - £2 0 0

Lighters and Scows exceeding 10 tons. Per quarter - £2 0 0  
and 1s. additional for every ton, exceeding 10 tons, and up to 100 tons burthen.

**SCHEDULE D.**

**Landing Permits.**

For invoices under £100 in value	-	-	-	-	£0	4	2
Above £100 and under £250 in value	-	-	-	-	0	6	3
For invoices above £250 and under £500 in value	-	-	-	-	0	8	4
For invoices above £500 and under £1000 in value	-	-	-	-	0	12	6
For invoices above £1000	-	-	-	-	0	16	8

**LIST OF ANIMALS FOUND IN VANCOUVER ISLAND.**

**POPULAR NAMES.**

**SCIENTIFIC NAMES,**

As adopted in Vol. 8th Pacific Railroad Reports.

American Panther, or Cougar; .....	Felis concolor.	L.
Wild Cat; .....	Lynx fasciatus.	Raf.
Gray Cat; .....	Canis occidentalis.	Var. griseo albus
Dusky Wolf; .....	Canis occidentalis.	Var. nubilus.

POPULAR NAMES.	SCIENTIFIC NAMES]
Red Fox;.....	<i>Vulpes macrourus.</i> Baird.
Fisher, Black Cat;.....	<i>Mustela Pennantii.</i> Erxl.
Mink, or Minz,.....	<i>Putorius vison.</i> Baird.
American Sable, or Pine Martin;.....	<i>Mustela Americana.</i> Turton.
Raccoon, Black footed.....	<i>Proceon Hernandezii.</i> Baird.
Beaver;.....	<i>Castor Canadensis.</i> Kuhl.
Black Bear;.....	<i>Ursus Americanus.</i> Pallas.
Brown Bear;.....	Do do do
Wolverine;.....	<i>Gulo luscus.</i>
Common Otter;.....	<i>Lutra Californica.</i> Gray.
Sea Otter;.....	<i>Enhydra marina.</i> Fleming.
Red, or Pine Squirrel;.....	<i>Sciurus Douglasii.</i>
Red Deer, "Elk;".....	<i>Cervus Canadensis.</i>
Black Tailed Deer;.....	<i>Cervus Columbianus.</i>
Ermine;.....	<i>Mustela erminea.</i>
Musquash, or Musk Rat;.....	<i>Fiber zibethicus.</i>
Sea Lion;.....	<i>Platyrrhynchus leoninus.</i>
Hair and Fur Seals;.....	<i>Phoca, vitulina, and Arctocephalus ursinus.</i>
Mountain Goat;.....	<i>Aplocerus montanus.</i>

# LIST OF BIRDS FOUND ON VANCOUVER ISLAND.

Names adopted from 9th Vol. Pacific Railroad Report.

POPULAR NAMES.	SCIENTIFIC NAMES.
Pigeon Hawk;.....	<i>Falco columbarius.</i>
Sparrow Hawk;.....	<i>Falco sparverius.</i>
Goshawk;.....	<i>Astur atricapillus.</i>
Sharp Shin Hawk;.....	<i>Accipiter fuscus.</i>
Western Red Tail Hawk;.....	<i>Buteo montanus.</i>
White-headed Eagle;.....	<i>Haliaetus leucocephalus.</i>
Great Horned Owl;.....	<i>Bubo Virginianus.</i>
Snowy Owl;.....	<i>Nyctea nivea.</i>
Saw Whet Owl;.....	<i>Nyctale Acadica.</i>
Pigmy Owl;.....	<i>Glaucidium gnoma.</i>
Harris's Woodpecker;.....	<i>Picus Harrisii.</i>
Gairdner's Woodpecker;.....	<i>Picus Gairdneri.</i>
Red Breasted Woodpecker;.....	<i>Sphyrapicus ruber.</i>
Pileated Woodpecker, or Log Cock;.....	<i>Hylatomus pileatus.</i>
Red Shafted Flicker;.....	<i>Colaptes Mexicanus.</i>
Red Backed Humming Bird;.....	<i>Selasphorus Rufus.</i>
Night Hawk;.....	<i>Chordeiles popetue.</i>
Belted Kingfisher;.....	<i>Ceryle alcyon.</i>
Olive Sided Fly Catcher;.....	<i>Contopus borealis.</i>
American Robin, or Thrush;.....	<i>Turdus migratorius.</i>
Varied Thrush, or Painted Robin;.....	<i>Turdus naevius.</i>
Western Blue Bird;.....	<i>Sialia Mexicana.</i>
Ruby Crowned Wren;.....	<i>Regulus calendula.</i>
Golden Crested Wren;.....	<i>Regulus satrapa.</i>
American Titlark;.....	<i>Anthus Ludovicianus.</i>
Macgillivray's Warbler;.....	<i>Geothlypis Macgillivrayi.</i>
Orange Crowned Warbler;.....	<i>Helminthophaga celata.</i>
Audubon's Warbler;.....	<i>Dendroica Audubonii.</i>
Yellow Warbler;.....	<i>Dendroica aestiva.</i>
Louisiana Tanager;.....	<i>Pyranga Ludoviciana.</i>
Barn Swallow;.....	<i>Hirundo horreorum.</i>
White Bellied Swallow.....	<i>Hirundo bicolor.</i>
Violet green Swallow.....	<i>Hirundo thalassina.</i>

## POPULAR NAMES.

## SCIENTIFIC NAMES.

Warbling Flycatcher.....	Vireo gilvus.
Blue-headed do.....	Vireo solitarius.
Winter Wren .....	Troglodytes hyemalis.
Rock Wren .....	Salpinctes obsoletus.
Slender-bill Nuthatch.....	Sitta aculeata.
Chestnut backed Tit.....	Parus rufescens.
Western purple Finch.....	Carpodacus Californicus.
Pine Finch.....	Chrysomitris pinus.
Western white crowned Sparrow.....	Zonotrichia Gambelli.
Golden crowned do.....	do coronata.
Oregon Snowbird.....	Junco Oregonus.
Chipping Sparrow .....	Spizella socialis.
Western song Sparrow.....	Melospiza rufina.
Townsend's fox Sparrow.....	Passarella Townsendii.
Blackheaded Grosbeak.....	Guiracamelanocephala.
Oregon ground Robin.....	Pipilo Oregonus.
Western meadow Lark.....	Sturnella neglecta.
Brewer's Blackbird.....	Scolecophagus cyanocephalus.
Redwing do .....	Agelaius phoeniceus.
American Raven .....	Corvus carnivorus.
Northwestern Fish Crow.....	do caurinus.
Steller's Jay.....	Cyanura Stellerii.
Band-tailed Pigeon.....	Columba fasciata.
Blue Grouse.....	Tetrao obscurus.
Ruffed Oregon Grouse, or "Partridge".....	Bonasa Sabinii.
Sandhill Crane.....	Grus Canadensis.
Great blue Heron .....	Ardea Herodias.
Surf Bird.....	Aphriza virgata.
Bachman's Oyster Catcher.....	Haematopus niger.
Black Turnstone .....	Streptopelia melanocephalus.
Wilson's Snipe .....	Gallinago Wilsoni.
Telltale Tattler .....	Gambetta melanoleuca.
American Coot or Mud Hen.....	Fulica Americana.
The Swan.....	Cygnus Americanus.
Canada Goose.....	Bernicla Canadensis.
White cheeked Goose.....	do Leucopareia.
Hutchins's Goose.....	Bernicla Hutchinsii.
Snow Goose.....	Anser hyperborea.
Mallard or Stock Duck .....	Anas boschas.
Green winged Teal.....	Nettion Carolinensis.
Baldpate or American Widgeon .....	Mareca Americana.
Big blackhead or Scaup Duck .....	Fulix marilla.
Canvas-back Duck.....	Aythia vallisneria.
Golden eye or whistle-wing Duck.....	Bucephala Americana.
Bufflehead Duck .....	do albeola.
Harlequin Duck .....	Histrionicus torquatus.
The Longtailed Duck or South-south- erly .....	Harelda glacialis.
Velvet Duck .....	Melanetta velvetina.
Surf Duck .....	Pelionetta perspicillata.
Goosander .....	Mergus Americana.
Redbreasted Merganser.....	do serrator.
Hooded Merganser.....	Lophodytes cucullatus.
Violet-green Cormorant.....	Graculus violaceus.
Shorttailed Albatross.....	Diomedea brachyura.
Glaucous winged Gull.....	Larus glaucescens.
Sacklev's Gull.....	do Suckleyi.
Great Northern Diver.....	Colymbus torquatus.
Blackthroated Diver .....	do arcticus.
Redthroated do.....	do septentrionalis.

POPULAR NAME.	SCIENTIFIC NAME.
Rednecked Grebe.....	Podiceps griseigena.
Western do .....	do occidentalis.
Horned do .....	do cornutus.
Western Guillemot.....	Uria columba.
Marbled Auk.....	Brachyramphus marmoratus.

### LIST OF SHELLS,

From the Rocks and Dredge off Esquimalt and Victoria Harbours.

#### PALLIOBRANCHIATA :

*Teretratellidæ*, *Terebratella cauria* and *pulvinata*.

#### LAMELIBRANCHIATA :

*Solenidæ*, *Solen sicarius*.  
*Tellinidæ*, *Macoma nasuta*,  
*Strigilla caurina*.  
*Veneridæ*, *Tapes Petitii*.  
*Cardiadæ*, *Cardium Nuttallii*.  
*Mytilidæ*, *Mytilus edulis*, *modiola modiolus*.  
*Modiola nitens*.  
*Pectinidæ*, *Pecten hericius*.  
*Ostreidæ*, *Ostrea conchaphila*.

#### SCUTIBRANCHIATA :

*Chitonidæ*—*Toncia lineata*, *Mopalia vespertina*, *Katherina tuniata*, *Cryptochiton*, *Stelleri*.  
*Acmæidæ*—*Acmæa patina*, *Acmæa pelta*, *Acmæa persona*,  
*Acmæa spectrum*, *Scurria Mitra*.  
*Figurellidæ*—*Glyphis aspera*, *Puncturella cucullata*.  
*Trochidæ*—*Ziziphinus annulatus*, *Ziziphinus filiosus*.

#### PACTINIBRANCHIATA :

*Calyptrocidæ*—*Galerus fastigiatus*, *Crepidula incurva*.  
*Cerithiadæ*—*Cerithidea sacrata*.  
*Littorinidæ*—*Littorina Sitkana*, *Littorina plena*.  
*Naticidæ*—*Natica clausa*.

#### PACTINIBRANCHIATA,

*Tritonidæ*—*Argobuccinum Oregonense*.  
*Purpuridæ*—*Purpura decemcostata*, *Purpura emarginata*,  
*Purpura lactuca*.  
*Buccinidæ*—*Nassa mendica*.  
*Murcidæ*—*Chrysodomus antiquus*, *Chrysodomus Sitkana*.

### LIST of Trees and Shrubs of Economic Value, found in Vancouver Island.

POPULAR NAMES.	SCIENTIFIC NAMES.
The Douglas Pine or Oregon Red Pine.....	<i>Abies Douglassii</i> .
Spruce Fir .....	do <i>Menziesii</i> .
Yellow Fir.....	do <i>grandis</i> .
Balsam Fir.....	
Hemlock Spruce.....	<i>Abies Canadensis</i> .
Wild Cherry.....	<i>Cerasus mollis</i> .
White Pine or Weymouth Pine.....	<i>Pinus strobus</i> .
Yellow Pine.....	<i>Pinus ponderosa</i> .
Cedar—the Oregon Cedar.....	<i>Thuja gigantea</i> .
Yellow Cypress.....	<i>Cupressus Metkatenses</i> .
Arbor Vitæ .....	<i>Thuja plicata</i> .
Yew .....	<i>Taxus brevifolia</i> .
The Oak.....	<i>Quercus Garryana</i> .
The white, or broad leaved Maple.....	<i>Acer macrophyllum</i> .
Vine .....	do <i>Acer circinatum</i> .
The Oregon Alder .....	<i>Alnus Oregona</i> .
Oregon Dogwood .....	<i>Cornus Nuttallii</i> .
Arbutus .....	<i>Arbutus Menziesii</i> .

American Aspen.....	<i>Populus tremuloides</i>
Oregon Crab Apple .....	
The Willow.....	<i>Pyrus rivularis.</i>
Cottonwood .....	<i>Salix Scouleriana.</i>

#### SHERUBERY UNDER GROWTH.

The Hazel.....	<i>Corylus Americana.</i>
Red Cornel, or Willow.....	<i>Cornus Drummondii.</i>
Holly leaved Barberry, or Oregon grape	<i>Berberis aquifolium.</i>
Mock Orange or Seringa.....	<i>Philadelphus macropetalus.</i>
Red, white and black Raspberry.....	<i>Rubus Nutkanus, leucodermis.</i>
Three kinds of Gooseberry .....	<i>Ribes divaricatum, niveum and sanguineum.</i>
Serviceberry .....	<i>Amelanchier Canadensis.</i>
Elder .....	<i>Sambucus glauca.</i>
Sallat Berry.....	<i>Gaultheria shallon.</i>
Huckleberry, or Bløberry.....	<i>Vaccinium ovatum, ovalifolium, and parvifolium.</i>
Blackberry (Rubus).....	<i>Symphoricarpus racemosus.</i>
Snowberry .....	<i>Rubus spectabilis.</i>
Salmonberry .....	<i>Frangula Purshiana.</i>
Oregon Buckthorn.....	<i>Lonicera occidentalis.</i>
Honeysuckle .....	<i>Hedera.</i>
Ivy.....	<i>Cratægus Coccinea ?</i>
Hawthorn.....	<i>Lonicera involucrata.</i>
Fly Blossom, or Bearberry.....	<i>Rosa fraxinitolia.</i>
Wild Rose .....	

#### GRASSES, LEGUMINOUS PLANTS, &c., &c.

White Clover.....	<i>Trifolium repens.</i>
Reed Meadow Grass .....	<i>Glyceria aquatica.</i>
Bent Spear Grass .....	<i>Poa pratensis ?</i>
Sweet Grass .....	<i>Festuca pratensis.</i>
Wild Timothy, or Herd's grass.....	<i>Phleum pratense.</i>
Wild Oat .....	<i>Stipa avenacea ?</i>
Broad leaved Rush.....	<i>Juncus.</i>
Cowslip.....	<i>Primula veris, vel Douglasii.</i>

#### THE Flexibility, Resistance, and Density of Masts from Vancouver Island compared with Masts from Riga :

The principal quality of these woods is a flexibility and a tenacity of fibre rarely met with in trees so aged ; they may be bent and twisted several times in contrary directions without breaking.

Several poles of the greatest length having the end at the foot, and the top of the tree cut off, were tried comparatively with poles of the same dimensions cut from a Riga spar of first class, and the following results were found :

Maximum degree of bending } before rupture at the foot }	Vancouver Pine.	Riga Pine.
At the head.....	0m 025.....	0m 028
	0 019.....	0 016
Mean.....	0 022.....	0 022
Charge of rupture (per centimeters.. } Squared at the foot .....	23k 75.....	21k 00
At the head.....	16 11.....	19 68
	19 93	20 23
Density of the wood } at the foot of the tree }	0 636.....	0 726
Density at the head .....	0 478.....	0 532
	0 557	0 629

These experiments give a mean almost identical, for the bending and breaking of the two kinds of wood, while the density differs notably to the advantage of the Vancouver wood.

The only question still undecided is that of durability. The masts and spars of Vancouver are woods rare and exceptional for dimensions and superior qualities, strength, lightness, absence of knots and other grave vices.

"Toulon," September 21, 1860. Signed, L. A. SILVESTER, Du Perron, Chief Engineer of 3d Section/

## TABLE,

Showing Gross Amount of Returns under "Trades License Act." for the Half Year ending 30th December, 1860, and 30th June, 1861, with an Analysis of the Return for the Half Year ending 31st December, 1861.

Return for the Half Year ending 31st December, 1860, ..... £205,035  
Return for the Half Year ending 30th June, 1861, ..... 108,150

## Half Year ending 31st December, 1861.

2 Assayers.....	£1000	1 Letter and Hirer.....	95
1 Agent, Estate .....	95	2 Livery Stables .....	1100
1 Agent, New .....	240	3 Lumber Merchants .....	4000
5 Barbers and Hair dressers.....	535	1 Mason .....	500
1 Bagmaker.....	150	1 Marketman, Meat and Vegetable .....	300
7 Blacksmiths.....	1105	23 Merchants .....	84,715
14 Bakers .....	3760	3 Milkmen .....	175
8 Boot and Shoe Makers .....	1105	3 Milliners.....	1005
5 Butchers .....	4245	1 Miller and Baker .....	1200
2 Brewers .....	550	1 Nurseryman .....	95
5 Brickmakers .....	750	2 Paper Hangers .....	195
2 Brokers.....	290	7 Painters .....	1125
1 Boot and Shoe Dealer .....	3000	1 Photographer .....	150
3 Booksellers .....	1845	5 Plasterer .....	640
2 Board and Lodging House Keepers .....	400	1 Prices Currents, dealer in .....	95
2 Carriers .....	245	2 Provision Merchants .....	5450
1 Carman .....	95	5 Restaurants, Keepers of .....	2250
1 Camphine Dealer .....	95	1 Sail Maker .....	150
35 Carpenters and Builders.....	7560	2 Saddlers.....	300
1 Cigar Dealer .....	450	1 Scourer .....	95
1 Confectioner .....	95	2 Scriveners .....	1350
1 Cooch Builder.....	150	1 Ship Chandler .....	450
1 Coffee Dealer.....	95	1 Shipwright .....	240
3 Cow Ceepers .....	340	1 Skin Dealer .....	100
14 Clothiers .....	7145	1 Soda Water Manufacturer .....	150
7 Contractors .....	1730	5 Store Keepers .....	4695
1 Commission Dealer .....	100	8 Ship Owners.....	1095
2 Commission Agents.....	345	1 Syrup Manufacturer.....	95
3 Commission Merchants.....	845	3 Traders, Indian.....	1245
1 Drayman .....	95	4 Traders .....	695
3 Druggists and Apothecaries .....	5500	4 Tailors .....	1040
9 Fruiterers .....	1425	12 Teamsters .....	1545
2 Fish Dealers .....	190	1 Tentmaker.....	550
1 Flour Dealer .....	450	3 Tobacconists.....	3105
1 Furniture Dealer .....	1000	4 Tinsmiths .....	1020
1 Fur Dresser .....	95	1 Upholsterer.....	95
1 Gunsmith .....	600	2 Watchmakers .....	245
25 Grocers .....	9125	1 Washerman .....	95
2 Greengrocers.....	190	4 Water Carriers .....	540
2 Gardners, Market .....	109	3 Warehouse & Wharfingers .....	600
1 Hosier.....	500	1 Wood Dealer.....	95
2 Horse Dealers .....	190	1 Woollen Goods Dealer.....	450
5 Ironmongers .....	11850	1 Wheelwright & Blacksmith .....	150
1 Ironfounder .....	600	1 Veterinary Surgeon.....	1000
2 Jewelers .....	395		
1 Jobber .....	100		
1 Lime Burner .....	95		
		Total .....	£95,8180



**ARTICLES Imported into British Columbia from Vancouver Island in 1880—Value,**  
£201,712 13s. 6d.

Ale and Porter in wood,	Bulls.
do do in bottle,	Cows.
Agricultural Implements,	Calves.
Axes,	Beef Cattle.
Bacon and Hams,	Sheep and Goats.
Barley,	Hogs.
Beans,	Machinery.
Beef,	Matches.
Blankets,	Meat.
Boots and Shoes,	Meats preserved.
Bran,	do dried.
Bread,	do fresh.
Bricks,	Miscellaneous Ware.
Butter,	Molasses.
Camphene,	Nails.
Candles,	Nuts and Almonds.
Cheese,	Oils, (sweet).
China Merchandise,	do (Linseed).
Chocolate,	do various
Cider,	Oats.
Cigars,	Opium.
Clothing,	Paints.
Coal,	Potatoes.
Coffee,	Pork (salt).
Confectionery,	do do.
Copper,	Personal effects
Cordials,	Plants.
Drugs and Chemicals,	Poultry.
Dry Goods,	Quicksilver.
Earthenware,	Rice.
Eggs,	Rope and Cordage.
Fish (preserved,)	Salt.
Fish—dried and salt,	Seeds (Garden).
Flour,	do (Grain, etc).
Firearms,	Shot.
Fruits (preserved,)	Soap.
do dried,	Stationery.
do fresh,	Sugar.
Furniture,	Spirits.
Glassware,	Tar and Pitch.
Groceries,	Tea.
Gunpowder,	Tinware.
Hardware,	Tobacco.
Hay,	Vegetables.
Harness and Saddlery,	do Turnips, Carrots, etc., etc.
Iron and Steel,	do fresh.
Lard,	do preserved.
Lead,	Wines.
Leather,	do Champagne.
Lime and Cement,	do China medicated.
Lumber,	do Claret, other description and bet-
Live Stock—	ter.
Horses,	Wheat.
Mules,	Window Sashes and Doors.
Asses,	Woodenware.
Oxen,	Wagons.
	Yeast Powder

**ABSTRACT OF ACTS** Passed by House of Assembly, since the First Session, beginning 1st March, 1860.

- No. 1. "Administration of Oaths Act." Provides for the administration of Oaths in the House of Assembly, and the production of Evidence before Committees of the same.
2. "Vancouver Island Joint Stock Companies' Act." Extends the Provisions of the Joint Stock Companies Acts, 1856, 1857 and 1858, to Vancouver Island and its dependencies.
3. Act for the payment of certain Salaries.
4. Bill of Supply £3,207 14 1.
5. Bill of Supply, £9,364 0 0.
6. "Act to Improve the Streets of Victoria." Authorizing the collection of a Tax to be called the Victoria Street Fund.
7. "Fireman's Protection Act." Provides for the Protection of the Members of Fire Companies of Victoria.
8. "Trades License Act." Imposes a Tax on all Trades and Occupations.
9. "Indian Liquor Act." For Preventing the Sale or Gift of Spirituous Liquor to Indians.
10. "Road Act." Provides for the Repair, Improvement, and Regulation of Roads in Vancouver Island and its dependencies.
11. "Act to Amend Imperfect Titles." Confirms certain persons in the Fee Simple of the Real Estate they now hold.
12. "Real Estate Tax Act." Levies an Annual Tax of 1 per cent. on all Real Estate.
13. "Victoria and Esquimalt Harbour Dues Act." Amending the scale of Fees charged for the Entrance and Clearance of Vessels, Licenses to scows, boats, and other craft; and dues for Landing Permits, &c.
14. "Minor Offences Act." For Rendering the Administration of Justice in minor Criminal Cases, more speedy and certain.
15. "Limitation of Foreign Actions Act." Declaring the Limitation of certain causes of action and suit.
16. "Annual Registration of Voters Act." Amends the Registration of Voters Act, of 1859.
17. "Victoria Gas Company Act." Incorporates the Victoria Gas Company.
18. "Victoria Bridge Removal Act."
19. "Act for Confirming Titles from the Hudson's Bay Company." Confirming certain Titles to Real Property in Vancouver Island.
20. "Land Registry Act." To Facilitate the Transfer of Real Estate, and to provide for the Registration of Titles.
21. "Powder Magazine Act." Grants certain Privileges to the Builder or Builders of a Powder Magazine.
22. "Vancouver Island Land Proclamation." By the Governor.
- 23 & 24. Supplemental to ditto.
25. "Victoria Harbour Act." Authorises the raising of a Loan of Ten Thousand Pounds upon the security of the Dues and Moneys levied by virtue of the Victoria and Esquimalt Harbour Dues Act, 1860.
26. "Liquor License Act." Provides for and Regulates the Sale of Wines, Spirits, Malt and other Liquors.
27. Proclamation, by His Excellency the Governor, "Establishing Alberni, in Barclay Sound, as a Port of Entry."
28. "An Act to Extend and Amend the Provisions of the Fireman's Protection Act, 1860.
29. "An Act, To enable Aliens to Hold and Transmit Real Estate."
30. "Supplementary Street Act." Authorises the continuation of certain streets in Victoria.
31. "Vancouver Island Civil Procedure Act." Amending the Procedure in Civil Cases.
32. "Alien Act, 1862." Provides for the Naturalization of Aliens.
33. "Act for the Confirmation of the Titles of Aliens to Real Estate, 1861."

Cures Defects in Titles to Real Estate, held by or devised through Aliens.

34. "Bills of Sale Act, 1861." For Preventing Frauds upon Creditors by Secret Bills of Sale of Personal Chattels.
35. "Pawnbroker's Act." Regulates the Business of Pawnbrokers.
36. "Summary Procedure on Bills of Exchange Act, 1861." Facilitates the Remedies on Bills of Exchange, and Promissory Notes, by the prevention of frivolous or fictitious defences to Actions thereon.
37. "Victoria Gas Company Extension Act, 1861." Enlarges the time limited by the Act of 1860, for the Establishment of Gas Works and Buildings by the Victoria Gas Company.
38. "Trades License Amendment Act." Amending the Act of 1860. Casual Traders to pay Annual License of Five Pounds, and the Half-yearly Assessment to be as shewn by schedule A.

	Under £100	half yearly	£1 0 0
£100	and under 250	"	1 10 0
250	" 500	"	2 0 0
500	" 1000	"	3 10 0
1000	" 2500	"	6 0 0
2500	" 5000	"	9 0 0
5000	" 10,000	"	15 0 0
10,000	" 20,000	"	25 0 0
20,000	" 30,000	"	35 0 0
30,000	" 40,000	"	45 0 0
40,000	" 50,000	"	55 0 0
	Above £50,000	"	60 0 0

39. "Extension of Limitation of Foreign Actions Act." Extends provisions of the same.
40. "Swine and Goat Act." To prohibit Swine and Goats running at large in Victoria, and Goats in settled districts.
41. "Bankruptcy Act, 1862." Declares the law relating to Bankruptcy and Insolvency in Vancouver Island and dependencies.



## ERRATA.

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In last line of page 17, for "street of water" read "*sheet* of water."

In page 22—second line in first paragraph—for "96 overcast and foggy" read "50 overcast and foggy."

